

NACOmatic

Effective: 17-December-2009

Expires: 14-January-2010

Your Ad Here

~80,000 Page views/month

Contact:

Doug Ranz

248-318-0011

NACOmatic@hotmail.com

Warranty

I make absolutely no warranty nor guarantee whatsoever about the accuracy, availability, applicability and/or correctness of any of the information in this document.

The official, original NACO documents are available for your downloading pleasure from: <http://naco.faa.gov/index.asp?xml=naco/onlineproducts>

Copyright

This compilation is protected by US copyright laws and international copyright treaties.

Limitations

The sale, hosting and/or distribution of this document in any and all forms, is prohibited.

Release from Liability

All users of this compilation must agree to be legally bound hereby, that Douglas R. Ranz ("Released Party") SHALL NOT BE LIABLE FOR MY DEATH OR INJURY TO MY PERSON, OR FOR ANY LOSS FOR DAMAGE TO MY PROPERTY OR REPUTATION caused in any manner whatsoever, whether attributable to the negligence of the Released Party, or for any other reason, occurring during the time that I am operating an aircraft.

I do hereby waive any right of action against the Released Party from any and all causes or claims that I may have against them from the beginning of time. I further agree not to sue on any such cause or claim. This agreement shall not release liability for gross negligence or willful misconduct of the Released Party. I agree to indemnify and hold the Released Party harmless for any losses, judgments, damages or fees he may incur, including but not limited to attorneys fees, arising out any lawsuit related to the planning, flight and/or enforcement of or legal challenge to this agreement. It is my intention that this agreement be interpreted and enforced to the maximum extent allowed by Michigan law.

MI Min Alt#1 - 4	FKS - 281	YQG - 246
MI Min Rdr#1 - 9	FNT - 270	
MI Min TO#1 - 12	FPK - 110	
13C - 384	GDW - 292	
1D2 - 484	GLR - 288	
35D - 26	GOV - 310	
36MI - 565	GRR - 298	
3CM - 81	HAI - 572	
3GM - 293	HTL - 334	
3TE - 568	HYX - 529	
3TR - 469	IKW - 427	
48D - 115	IMT - 350	
4D0 - 296	IRS - 561	
60G - 262	ISQ - 408	
6D6 - 313	IWD - 356	
6D9 - 261	JXN - 361	
6G0 - 120	JYM - 329	
77G - 409	LAN - 388	
7D3 - 71	LDM - 400	
83D - 559	LWA - 553	
8D4 - 556	MBL - 405	
9D9 - 328	MBS - 533	
9G2 - 397	MCD - 403	
ACB - 85	MGN - 325	
ADG - 23	MKG - 451	
AMN - 27	MNM - 421	
ANJ - 544	MOP - 437	
APN - 31	MTC - 440	
ARB - 39	OEB - 116	
AZO - 372	OGM - 471	
BAX - 64	ONZ - 249	
BEH - 87	OSC - 472	
BFA - 96	OZW - 338	
BIV - 330	PHN - 518	
BTL - 72	PLN - 478	
C20 - 93	PTK - 491	
C91 - 256	PZQ - 522	
CAD - 98	RMY - 418	
CFS - 103	RNP - 475	
CIU - 545	RQB - 94	
CMX - 316	SAW - 412	
CVX - 106	SJX - 83	
D95 - 396	SLH - 112	
D98 - 525	TEW - 419	
DET - 123	TTF - 430	
DRM - 258	TVC - 575	
DTW - 149	VLL - 581	
DUH - 387	Y31 - 588	
ERY - 467	Y47 - 461	
ESC - 263	Y70 - 348	
FFX - 284	YIP - 215	

INSTRUMENT APPROACH PROCEDURE CHARTS

A IFR ALTERNATE AIRPORT MINIMUMS

Standard alternate minimums for non precision approaches are 800-2 (NDB, VOR, LOC, TACAN, LDA, VORTAC, VOR/DME, ASR or WAAS LNAV); for precision approaches 600-2 (ILS or PAR). Airports within this geographical area that require alternate minimums other than standard or alternate minimums with restrictions are listed below. NA - means alternate minimums are not authorized due to unmonitored facility or absence of weather reporting service. Civil pilots see FAR 91. IFR Alternate Airport Minimums: Ceiling and Visibility Minimums not applicable to USA/USN/USAF. Pilots must review the IFR Alternate Airport Minimums Notes for alternate airfield suitability.

NAME ALTERNATE MINIMUMS

ADRIAN, MI

LENAAWEE COUNTY RNAV (GPS) Rwy 5
RNAV (GPS) Rwy 23

NA when local weather not available.

ALPENA, MI

ALPENA COUNTY RGNL ... RNAV (GPS) Rwy 1
NA when local weather not available.

ANN ARBOR, MI

ANN ARBOR MUNI RNAV (GPS) Rwy 6¹
RNAV (GPS) Rwy 24¹
VOR Rwy 6²
VOR Rwy 24²

¹NA when local weather not available.

²NA when control tower closed.

BAD AXE, MI

HURON COUNTY
MEMORIAL RNAV (GPS) Rwy 4
RNAV (GPS) Rwy 17
RNAV (GPS) Rwy 22
RNAV (GPS) Rwy 35

NA when local weather not available.

BATTLE CREEK, MI

W.K. KELLOGG ILS or LOC Rwy 23¹
RADAR-1²
RNAV (GPS) Rwy 5³
RNAV (GPS) Rwy 23³
VOR or TACAN Rwy 5⁴
VOR Rwy 23³
VOR or TACAN or GPS Rwy 31⁴

¹NA when control tower closed.

²NA when Kalamazoo control tower closed.

³NA when local weather not available.

⁴NA when control tower closed except for operators with approved weather reporting service.

NAME ALTERNATE MINIMUMS

BEAVER ISLAND, MI

BEAVER ISLAND RNAV (GPS) Rwy 27
NA when local weather not available.

BELLAIRE, MI

ANTRIM COUNTY RNAV (GPS) Rwy 2¹²
VOR Rwy 2³

¹NA when local weather not available.

²Category D, 900-2 $\frac{1}{4}$.

³Categories A,B, 1000-2; Category C, 1000-2 $\frac{1}{4}$;

Category D, 1000-3.

BENTON HARBOR, MI

SOUTHWEST
MICHIGAN RGNL RNAV (GPS) Rwy 9
VOR Rwy 9

NA when local weather not available.

CADILLAC, MI

WEXFORD COUNTY NDB Rwy 7¹
NDB Rwy 25²
RNAV (GPS) Rwy 7³
RNAV (GPS) Rwy 25³

¹Categories, A, B, 900-2; Category C, 900-2 $\frac{1}{4}$; Category D, 900-2 $\frac{1}{4}$.

²Category D, 800-2 $\frac{1}{4}$.

³NA when local weather not available.

CARO, MI

TUSCOLA AREA RNAV (GPS) Rwy 5
RNAV (GPS) Rwy 23
VOR/DME-A

NA when local weather not available.

CHARLEVOIX, MI

CHARLEVOIX MUNI RNAV (GPS) Rwy 9
NA when local weather not available.

NAME **ALTERNATE MINIMUMS**
CHARLOTTE, MI
FITCH H BEACH **RNAV (GPS) Rwy 20**
NA when local weather not available.

COLDWATER, MI
BRANCH COUNTY
MEMORIAL **RNAV (GPS) Rwy 7**
RNAV (GPS) Rwy 25
VOR Rwy 7
VOR/DME Rwy 25
NA when local weather not available.

DETROIT, MI
COLEMAN A.
YOUNG MUNI **ILS or LOC Rwy 33¹**
NDB Rwy 15²
RNAV (GPS) Rwy 15²
RNAV (GPS) Rwy 33²
VOR Rwy 33²

¹ILS, 700-2.
²NA when local weather not available.

WILLOW RUN **VOR or GPS-A**
Category D, 800-2¼.

DETROIT/GROSSE ILE, MI
GROSSE ILE MUNI **NDB Rwy 4¹**
RNAV (GPS) Rwy 4²
RNAV (GPS) Rwy 22²
VOR-A²
NA when local weather not available.
¹Category A, B, 1000-2; Category C, 1000-2¾;
Category D, 1000-3.
²Category A, B, 900-2; Category C, 900-2½;
Category D, 900-2¾.

ESCANABA, MI
DELTA COUNTY **ILS or LOC Rwy 9¹**
LOC BC Rwy 27²
RNAV (GPS) Rwy 9²³
RNAV (GPS) Rwy 27²³
VOR Rwy 9²³
VOR Rwy 27²³
VOR Rwy 36²

¹ILS, Category C, 700-2; Category D, 800-2¼.
LOC, Category D, 800-2¼.
²Category D, 800-2¼.
³NA when local weather not available.

FLINT, MI
BISHOP INTL **ILS Rwy 9¹²**
ILS Rwy 27²
RADAR-1²
RNAV (GPS) Rwy 27³

¹LOC, DME required
²NA when control tower closed.
³NA when local weather not available.

NAME **ALTERNATE MINIMUMS**
FRANKFORT, MI
FRANKFORT DOW
MEMORIAL FIELD **RNAV (GPS) Rwy 15¹**
RNAV (GPS) Rwy 33¹
VOR/DME-A²
NA when local weather not available.

¹Category C, 900-2¾.
²Categories A,B, 900-2; Category C, 900-2¾.

FREMONT, MI
FREMONT MUNI **RNAV (GPS) Rwy 18**
RNAV (GPS) Rwy 36
VOR Rwy 18
VOR Rwy 36
NA when local weather not available.

GAYLORD, MI
GAYLORD RGNL **ILS Rwy 9¹**
VOR or GPS Rwy 9²
VOR or GPS Rwy 27²

¹ILS, Categories B,C, 700-2; Category D,
800-2½. LOC, Category D, 800-2½.
²Category D, 800-2½.

GRAND RAPIDS, MI
GERALD R. FORD INTL . **ILS or LOC Rwy 8R¹**
ILS or LOC Rwy 26L¹
ILS or LOC Rwy 35¹²
RADAR-1³
RNAV (GPS) Rwy 8L¹
RNAV (GPS) Rwy 8R¹
RNAV (GPS) Rwy 17¹
RNAV (GPS) Rwy 26L¹
RNAV (GPS) Rwy 26R¹
RNAV (GPS) Rwy 35¹
VOR Rwy 35¹

¹NA when local weather not available.
²ILS, Categories A, B, C, 700-2; Category D,
700-2¼. LOC, Category D, 800-2¼.
³NA when control tower is closed.

GRAYLING, MI
GRAYLING AAF **RNAV (GPS) Rwy 14**
NA when local weather not available.

HANCOCK, MI
HOUGHTON
COUNTY MEMORIAL **ILS or LOC Rwy 31¹²**
LOC/DME BC Rwy 13²³
RNAV (GPS) Rwy 31³
VOR Rwy 25³
VOR Rwy 31³

¹ILS, Category D, 700-2¼; LOC, Category D,
800-2¼.
²NA when local weather not available.
³Category D, 800-2¼.

NAME ALTERNATE MINIMUMS
HARBOR SPRINGS, MI
 HARBOR SPRINGS RNAV (GPS) Rwy 10
 RNAV (GPS) Rwy 28
 NA when local weather not available.
 Category B, 900-2.

HOLLAND, MI
 TULIP CITY RNAV (GPS) Rwy 8
 RNAV (GPS) Rwy 26
 NA when local weather not available.

HOUGHTON LAKE, MI
 ROSCOMMON COUNTY-
 BLODGETT MEMORIAL RNAV (GPS) Rwy 9
 RNAV (GPS) Rwy 27
 NA when local weather not available.

HOWELL, MI
 LIVINGSTON COUNTY
 SPENCER J HARDY RNAV (GPS) Rwy 13
 RNAV (GPS) Rwy 31
 VOR Rwy 31
 NA when local weather not available.

IRON MOUNTAIN-KINGSFORD, MI
 FORD RNAV (GPS) Rwy 1
 RNAV (GPS) Rwy 19
 VOR Rwy 31
 NA when local weather not available.

IRONWOOD, MI
 GOGEBIC-
 IRON COUNTY RNAV (GPS) Rwy 9
 RNAV (GPS) Rwy 27
 VOR/DME Rwy 9
 VOR/DME Rwy 27
 NA when local weather not available.
 Category A, B, 900-2; Category C, 900-2½;
 Category D, 1000-3.

JACKSON, MI
 JACKSON COUNTY-REYNOLDS
 FIELD ILS Rwy 24¹²
 NDB Rwy 24¹
 RNAV (GPS) Rwy 6³
 RNAV (GPS) Rwy 14³
 RNAV (GPS) Rwy 24³
 RNAV (GPS) Rwy 32³
 VOR Rwy 6³
 VOR Rwy 14³
 VOR Rwy 32³
 VOR/DME Rwy 24³

¹NA when control tower closed.
²ILS, Category D, 700-2.
³NA when local weather not available.

NAME ALTERNATE MINIMUMS
KALAMAZOO, MI
 KALAMAZOO/BATTLE CREEK
 INTL ILS or LOC Rwy 35¹
 LOC BC Rwy 17¹
 NDB Rwy 35¹
 RADAR-1¹
 VOR Rwy 5¹²
 VOR Rwy 23³

¹NA when control tower closed.
²Category D, NA.
³NA when control tower closed, except for
 operators with approved weather reporting
 service.

LUDINGTON, MI
 MASON COUNTY RNAV (GPS) Rwy 8
 RNAV (GPS) Rwy 26
 NA when local weather not available.

MANISTEE, MI
 MANISTEE
 COUNTY-BLACKER ILS Rwy 27
 ILS, Category D, 700-2¼. LOC, Category D,
 800-2¼.

MARQUETTE, MI
 SAWYER INTL ILS Rwy 1
 LOC, NA.

MENOMINEE, MI
 MENOMINEE-MARINETTE
 TWIN COUNTY RNAV (GPS) Rwy 3
 RNAV (GPS) Rwy 21
 RNAV (GPS) Rwy 32
 VOR-A
 NA when local weather not available.

MIDLAND, MI
 JACK BARSTOW RNAV (GPS) Rwy 6
 RNAV (GPS) Rwy 24
 VOR-A
 NA when local weather not available.

MONROE, MI
 CUSTER RNAV (GPS) Rwy 3
 RNAV (GPS) Rwy 21
 VOR Rwy 3¹
 VOR Rwy 21
 NA when local weather not available.
¹Category D, 800-2¼.

MOUNT PLEASANT, MI
 MOUNT PLEASANT MUNI ... RNAV (GPS) Rwy 9
 RNAV (GPS) Rwy 27
 VOR Rwy 27
 NA when local weather not available.

NAME ALTERNATE MINIMUMS
MUSKEGON, MI
 MUSKEGON COUNTY ILS Rwy 24¹
 ILS or LOC Rwy 32¹
 LOC BC Rwy 14¹²
 RADAR-1¹
 RNAV (GPS) Rwy 14²
 RNAV (GPS) Rwy 32²
 VOR-A¹

¹NA when control tower closed.

²NA when local weather not available.

OSCODA, MI

OSCODA-WURTSMITH RNAV (GPS) Rwy 6
 NA when local weather not available.

OWOSSO, MI

OWOSSO COMMUNITY ... RNAV (GPS) Rwy 10
 RNAV (GPS) Rwy 28
 VOR/DME Rwy 28

NA when local weather not available.

PELLSTON, MI

PELLSTON RGNL AIRPORT OF
 EMMET COUNTY ILS or LOC Rwy 32¹²
 RNAV (GPS) Rwy 5¹³
 RNAV (GPS) Rwy 23¹⁴
 RNAV (GPS) Rwy 32¹⁴
 VOR/DME Rwy 5³
 VOR Rwy 23¹⁴

¹NA when local weather not available.

²ILS, Category D, 700-2¼. LOC, Category D, 800-2¼.

³Categories A,B, 900-2; Category C, 900-2½; Category D, 900-2¾.

⁴Category D, 800-2¼.

PONTIAC, MI

OAKLAND COUNTY
 INTL ILS or LOC Rwy 9R¹²
 LOC BC Rwy 27L¹
 RNAV (GPS) Rwy 9R³
 RNAV (GPS) Rwy 27L³
 VOR Rwy 9R³
 VOR Rwy 27L³

¹NA when control tower closed.

²ILS, LOC, Categories A, B, C, D, 700-2.

³NA when local weather not available.

NAME ALTERNATE MINIMUMS
SAGINAW, MI
 SAGINAW COUNTY
 H W BROWNE ILS or LOC/DME Rwy 27
 RNAV (GPS) Rwy 9¹
 RNAV (GPS) Rwy 27

NA when local weather not available.

¹Category C, 800-2¼.

SAGINAW, MI (CON'T)

MBS INTL ILS or LOC Rwy 5¹
 ILS Rwy 23²
 RADAR-1¹
 RNAV (GPS) Rwy 5³
 RNAV (GPS) Rwy 14³
 RNAV (GPS) Rwy 23³
 RNAV (GPS) Rwy 32³
 VOR Rwy 5⁴
 VOR Rwy 14⁴
 VOR Rwy 32⁴

¹NA when control tower closed.

²DME or radar required; NA when control tower closed.

³NA when local weather not available.

⁴NA for NON-DME equipped aircraft when control tower closed.

SAULT STE MARIE, MI

CHIPPEWA
 COUNTY INTL RNAV (GPS) Rwy 16
 RNAV (GPS) Rwy 34
 VOR-A¹

NA when local weather not available.

¹DME standard, ADF NA.

SOUTH HAVEN, MI

SOUTH HAVEN
 AREA RGNL RNAV (GPS) Rwy 4
 RNAV (GPS) Rwy 22
 VOR Rwy 22

NA when local weather not available.

SPARTA, MI

PAUL C MILLER-
 SPARTA RNAV (GPS) Rwy 7
 RNAV (GPS) Rwy 25
 VOR-A

NA when local weather not available.

NAME ALTERNATE MINIMUMS

STURGIS, MI

KIRSCH MUNI **RNAV (GPS) Rwy 18**
RNAV (GPS) Rwy 36

NA when local weather not available.

Category D, 800-2¼.

TRAVERSE CITY, MI

CHERRY CAPITAL **ILS Rwy 28¹²**
NDB or GPS Rwy 28²³
RNAV (GPS) Rwy 10⁴⁵
VOR or TACAN or GPS-A³

¹ILS, Categories A,B, 800-2; Category C, 800-2¼; Category D, 800-2½. LOC, Category C, 800-2¼; Category D, 800-2½.

²NA when control tower closed.

³Category C, 800-2¼, Category D, 800-2½.

⁴Categories A, B, 1400-2; Categories C, D, 1400-3.

⁵NA when local weather not available.

WEST BRANCH, MI

WEST BRANCH
COMMUNITY **RNAV (GPS) Rwy 9¹**
RNAV (GPS) Rwy 27

NA when local weather not available.

¹Category C, 800-2¼; Category D, 800-2½.



RADAR INFORMATION APPROACH MINIMUMS

BATTLE CREEK, MI

Amdt. 2, DEC 13, 1990 (FAA)

ELEV 952

W. K. KELLOGG

RADAR - 119.2 340.9  

	RWY	GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS
CIRCLING			A	1420 -1	468	(500-1)	B	1440 -1	488	(500-1)
			C	1480 -1½	528	(600-1½)	D	1520 -2	568	(600-2)
			E	1740 -2¾	788	(800-2¾)				

When Kalamazoo control tower closed, procedure not authorized.



When Battle Creek control tower closed, use Kalamazoo altimeter setting and increase all MDA's 60 feet and Category E visibility ¼ mile.

FLINT, MI

Amdt. 8A, APR 13, 2006 (FAA)

ELEV 782

BISHOP INTL

RADAR - 118.8 257.9  

	RWY	GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS
ASR	36		ABC	1180 -1	398	(400-1)	D	1180 -1¼	398	(400-1¼)
	18		AB	1300 -1	523	(600-1)	C	1300 -1½	523	(600-1½)
			D	1300 -1¾	523	(600-1¾)				
	27		ABC	1240 -¾	470	(500-¾)	D	1240 -1	470	(500-1)
CIRCLING			AB	1300 -1	518	(600-1)	C	1300 -1½	518	(600-1½)
			D	1340 -2	558	(600-2)				

CAUTION: Brightly lighted parking lot 4000' E of approach end of rwy 27 can easily be confused for rwy 27.



For inoperative MALSR, increase ASR Rwy 27 Categories A and B visibility to 1.

GRAND RAPIDS, MI

Amdt. 10B, AUG 13, 1998 (FAA)

ELEV 794

GERALD R. FORD INTL

RADAR - 128.4 257.6  

	RWY	GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS
ASR	26L		ABC	1100 /24	310	(400-½)	D	1100 /50	310	(400-1)
	26R		ABC	1180 -1	386	(400-1)	D	1180 -1¼	386	(400-1¼)
	8R		AB	1200 -½	406	(500-½)	C	1200 -¾	406	(500-¾)
			D	1200 -1	406	(500-1)				
	8L		AB	1200 -1	413	(500-1)	CD	1200 -1¼	413	(500-1¼)
CIRCLING			AB	1280 -1	486	(500-1)	C	1280 -1½	486	(500-1½)
			D	1360 -2	566	(600-2)				

When control tower closed, ASR not authorized.

RADAR INSTRUMENT APPROACH MINIMUMS

KALAMAZOO, MI

Amdt. 9, OCT 25, 2007 (FAA)

ELEV **874**

KALAMAZOO/BATTLE CREEK INTL

RADAR-1 121.2 340.9 

	RWY	GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATH/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATH/ HAA	CEIL-VIS
ASR	35		AB	1280 /24	412	(500-½)	C	1280 /40	412	(500-¾)
			D	1280 /50	412	(500-1)				
	17		AB	1320 -1	453	(500-1)	C	1320 -1¼	453	(500-1¼)
			D	1320 -1½	453	(500-1½)				
CIRCLING			AB	1380 -1	506	(600-1)	C	1380 -1½	506	(600-1½)
			D	1440 -2	566	(600-2)				

For inoperative MALSR, increase S-35 Cat D visibility to RVR 6000.


When control tower closed, ASR NA.

LANSING, MI

Amdt. 15, AUG 27, 2009 (FAA)

ELEV **861**

CAPITAL CITY

RADAR - 118.65 133.475 226.4 

	RWY	GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATH/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATH/ HAA	CEIL-VIS
ASR	10R		ABC	1260 /24	399	(400-½)	D	1260 /50	399	(400-1)
	28L		AB	1320 /24	469	(500-½)	C	1320 /40	469	(500-¾)
			D	1320 /50	469	(500-1)				
	6		AB	1320 -1	462	(500-1)	C	1320 -1¼	462	(500-1¼)
			D	1320 -1½	462	(500-1½)				
	24		AB	1260 -1	403	(400-1)	CD	1260 -1¼	403	(400-1¼)
CIRCLING			AB	1380 -1	519	(600-1)	C	1380 -1½	519	(600-1½)
			D	1440 -2	579	(600-2)				

For inoperative MALSR, increase S-10R Cat D visibility to RVR 6000.

Visibility reduction by helicopters NA for Rwy 6, and Rwy 24.

Lost Communications (All Rwys): As directed by ATC on initial contact.



RADAR INSTRUMENT APPROACH MINIMUMS

MUSKEGON, MI

Amdt. 14, JUN 24, 1993 (FAA)

ELEV 628

MUSKEGON COUNTY

RADAR - 119.8 339.1  

	RWY	GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATH/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATH/ HAA	CEIL-VIS
ASR	24		AB	1040 -½	413	(500-½)	C	1040 -¾	413	(500-¾)
			D	1040 -1	413	(500-1)				
	32		AB	1060 /24	433	(500-½)	C	1060 /40	433	(500-¾)
			D	1060 /50	433	(500-1)				
	14		AB	1080 -1	452	(500-1)	C	1080 -1¼	452	(500-1¼)
			D	1080 -1½	452	(500-1½)				
CIRCLING	6		AB	1160 -1	537	(600-1)	C	1160 -1½	537	(600-1½)
			D	1160 -1¾	537	(600-1¾)				
			AB	1160 -1	532	(600-1)	C	1180 -1½	552	(600-1½)
			D	1220 -2	592	(600-2)				

For inoperative MALSR, increase Category D S-24 visibility ¼ mile.
When control tower closed, procedure NA.

SAGINAW, MI

Amdt. 9, AUG 1, 1985 (FAA)

ELEV 668

MBS INTL

RADAR - 120.95 126.45 235.625  

	RWY	GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATH/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATH/ HAA	CEIL-VIS
ASR	23		ABC	1020 -½	359	(400-½)	D	1020 -1	359	(400-1)
	5		ABC	1060 /24	394	(400-½)	D	1060 /50	394	(400-1)
CIRCLING			A	1100 -1	432	(500-1)	B	1120 -1	452	(500-1)
			C	1120 -1½	452	(500-1½)	D	1220 -2	552	(600-2)

Category D S-5 visibility increased to RVR 6000 for inoperative SSALR.
Category D S-23 visibility increased ¼ mile for inoperative MALSR.
When control tower not in operation, procedure NA.



INSTRUMENT APPROACH PROCEDURE CHARTS

IFR TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

Civil Airports and Selected Military Airports

ALL USERS: Airports that have Departure Procedures (DPs) designed specifically to assist pilots in avoiding obstacles during the climb to the minimum enroute altitude, and/or airports that have civil IFR take-off minimums other than standard, are listed below. Take-off Minimums and Departure Procedures apply to all runways unless otherwise specified. Altitudes, unless otherwise indicated, are minimum altitudes in MSL.

DPs specifically designed for obstacle avoidance are referred to as Obstacle Departure Procedures (ODPs) and are described below in text, or published separately as a graphic procedure. If the (Obstacle) DP is published as a graphic procedure, its name will be listed below, and it can be found in either this volume (civil), or a separate Departure Procedure volume (military), as appropriate. Users will recognize graphic obstacle DPs by the term "(OBSTACLE)" included in the procedure title; e.g., TETON TWO (OBSTACLE). If not assigned a SID or radar vector by ATC, an ODP may be flown without ATC clearance to ensure obstacle clearance.

Graphic DPs designed by ATC to standardize traffic flows, ensure aircraft separation and enhance capacity are referred to as "Standard Instrument Departures (SIDs)". SIDs also provide obstacle clearance and are published under the appropriate airport section. ATC clearance must be received prior to flying a SID.

CIVIL USERS NOTE: Title 14 Code of Federal Regulations Part 91 prescribes standard take-off rules and establishes take-off minimums for certain operators as follows: (1) Aircraft having two engines or less - one statute mile. (2) Aircraft having more than two engines - one-half statute mile. These standard minima apply in the absence of any different minima listed below.

MILITARY USERS NOTE: Civil (nonstandard) take-off minima are published below. For military take-off minima, refer to appropriate service directives.

NAME TAKE-OFF MINIMUMS

ADRIAN, MI

LENAWEE COUNTY (ADG)

ORIG 07130 (FAA)

TAKE-OFF MINIMUMS: **Rwys 11, 29**, NA-ATC.

NOTE: **Rwy 5**, multiple trees beginning 1837' from departure end of runway, 149' left of centerline, up to 75' AGL/873' MSL. Multiple trees beginning 953' from departure end of runway, 146' right of centerline, up to 74' AGL/872' MSL. **Rwy 23**, tree 1231' from departure end of runway, 633' left of centerline, 55' AGL/849' MSL.

ALLEGAN, MI

PADGHAM FIELD (35D)

AMDT 1 09183 (FAA)

TAKE-OFF MINIMUMS: **Rwys 14, 29, 32**, 300-1.

NAME TAKE-OFF MINIMUMS

ALMA, MI

GRATIOT COMMUNITY (AMN)

ORIG 09351 (FAA)

TAKE-OFF MINIMUMS: **Rwy 9**, 400-3 or std. w/ min. climb of 251' per NM to 1400.

NOTE: **Rwy 9**, multiple trees beginning 841' from DER, 438' right of centerline, up to 58' AGL/817' MSL. Multiple trees beginning 1383' from DER, 380' left of centerline, up to 71' AGL/820' MSL. **Rwy 18**, multiple trees beginning 1067' from DER, 152' right of centerline, up to 70' AGL/829' MSL. Multiple trees beginning 923' from DER, 374' left of centerline, up to 70' AGL/824' MSL. **Rwy 27**, multiple trees beginning 306' from DER, 272' right of centerline, up to 81' AGL/840' MSL. Multiple trees beginning 1168' from DER, 593' left of centerline, up to 93' AGL/852' MSL. **Rwy 36**, multiple trees beginning 239' from DER, 3' right of centerline, up to 86' AGL/845' MSL. Multiple trees beginning 143' from DER, 38' left of centerline, up to 103' AGL/852' MSL.

ALPENA, MI

ALPENA COUNTY RGNL (APN)
ORIG 09015 (FAA)

NOTE: **Rwy 1**, tree 2293' from departure end of runway, 525' left of centerline, 100' AGL/749' MSL. **Rwy 7**, trees beginning 858' from departure end of runway, 567' right of centerline up to 100' AGL/774' MSL. Trees beginning 1059' from departure end of runway, 166' left of centerline up to 100' AGL/769' MSL. **Rwy 19**, trees beginning 1789' from departure end of runway, 270' left of centerline up to 100' AGL/779' MSL. Trees beginning 1049' from departure end of runway, 777' right of centerline up to 100' AGL/789' MSL. Vent on cable 44' from departure end of runway, 147' left of centerline up to 25' AGL/685' MSL. **Rwy 25**, trees beginning 652' from departure end of runway, 53' left of centerline up to 100' AGL/755' MSL. Trees beginning 1021' from departure end of runway, 275' right of centerline up to 100' AGL/751' MSL.

ANN ARBOR, MI

ANN ARBOR MUNI (ARB)
AMDT 8 07354 (FAA)

TAKE-OFF MINIMUMS: **Rwys 12, 30**, NA-Environmental.

NOTE: **Rwy 6**, multiple trees beginning 442' from departure end of runway, 47' right of centerline, up to 79' AGL/899' MSL. Building 312' from departure end of runway, 479' right of centerline, 15' AGL/838' MSL. Multiple trees beginning 635' from departure end of runway, 182' left of centerline, up to 59' AGL/887' MSL. Building 99' from departure end of runway, 351' left of centerline, 22' AGL/849' MSL. **Rwy 24**, multiple trees beginning 479' from departure end of runway, 473' left of centerline, up to 100' AGL/929' MSL. Multiple trees beginning 462' from departure end of runway, 486' right of centerline, up to 50' AGL/885' MSL. Terrain 138' from departure end of runway, 475' right of centerline, 0' AGL/837' MSL.

BAD AXE, MI

HURON COUNTY MEMORIAL (BAX)
AMDT 4 07354 (FAA)

NOTE: **Rwy 4**, vehicle on road 244' from departure end of runway, 531' left of centerline, 15' AGL/774' MSL. Tree 810' from departure end of runway, 43' left of centerline, 100' AGL/859' MSL. Vehicle on road 223' from departure end of runway, 470' right of centerline, 15' AGL/774' MSL. **Rwy 17**, vehicle on road 164' from departure end of runway, on centerline, 15' AGL/784' MSL. Bush 81' from departure end of runway, 497' right of centerline, 4' AGL/757' MSL. Railroad 695' from departure end of runway, 684' right of centerline, 23' AGL/792' MSL. Terrain beginning 222' from departure end of runway, 70' right of centerline, 0' AGL/757' MSL. Trees beginning 855' from departure end of runway, 392' right of centerline, up to 100' AGL/879' MSL. Pole 1135' from departure end of runway, 755' left of centerline, 35' AGL/798' MSL. Terrain beginning 44' from departure end of runway, 9' left of centerline, 0' AGL/765' MSL. Trees beginning 1693' from departure end of runway, 372' left of centerline, up to 100' AGL/859' MSL. **Rwy 22**, terrain beginning 3' from departure end of runway, 172' left of centerline, 0' AGL/765' MSL. Tree 2334' from departure end of runway, 422' left of centerline, 100' AGL/869' MSL. Terrain beginning 49' from departure end of runway, 165' right of centerline, 0' AGL/762' MSL. Railroad 41' from departure end of runway, 390' right of centerline, 23' AGL/782' MSL. **Rwy 35**, antenna on tower 355' from departure end of runway, 478' right of centerline, 34' AGL/793' MSL. Antenna 359' from departure end of runway, 477' right of centerline, 30' AGL/793' MSL. Vehicle on road 575' from departure end of runway, 412' right of centerline, 15' AGL/778' MSL. Trees beginning 1259' from departure end of runway, 53' right of centerline, up to 100' AGL/842' MSL. Trees beginning 1509' from departure end of runway, 375' left of centerline, up to 100' AGL/859' MSL. Tower 1085' from departure end of runway, 698' left of centerline, 63' AGL/822' MSL.

BALDWIN, MI

BALDWIN MUNI (7D3)
ORIG 84075 (FAA)
TAKE-OFF MINIMUMS: **Rwys 5, 9, 23, 27**, 300-1.

BATTLE CREEK, MI

W. K. KELLOGG (BTL)
AMDT 2 91346 (FAA)

TAKE-OFF MINIMUMS: **Rwys 13, 31**, 300-1.
DEPARTURE PROCEDURE: **Rwy 31**, climb runway heading to 1400 before turning.

BAY CITY, MI

JAMES CLEMENTS MUNI (3CM)
AMDT 5 86128 (FAA)

TAKE-OFF MINIMUMS: **Rwys 9, 18, 23, 27, 36**, 300-1.
Rwy 5, 900-2.
DEPARTURE PROCEDURE: **Rwys 23, 27, 36**, climb runway heading to 2100 before turning. **Rwy 9**, left turn climb heading 070° to 2100 before turning. **Rwy 5**, right turn climb heading 070° to 2100 before turning. **Rwy 18**, right turn climb heading 230° to 2100 before turning.

BEAVER ISLAND, MI

BEAVER ISLAND (SJX)
ORIG 98001 (FAA)

TAKE-OFF MINIMUMS: **Rwys 9,27**, 300-1.
Rwys 5,14,23,32, NA.

BELLAIRE, MI

ANTRIM COUNTY (ACB)
AMDT 6 06215 (FAA)

TAKE-OFF MINIMUMS: **Rwy 2**, 700-3 or std. w/a min.
climb of 417' per NM to 1500.

DEPARTURE PROCEDURE: **Rwy 2**, climb heading
022° to 1200 before turning right. **Rwy 20**, climb
heading 202° to 1300 before turning left.

NOTE: **Rwy 2**, road 385' from departure end of runway,
528' right of centerline, 15' AGL/646' MSL. Multiple
trees beginning 406' from departure end of runway, 235'
left of centerline, up to 100' AGL/884' MSL. Multiple
trees beginning 406' from departure end of runway, 235'
right of centerline, up to 100' AGL/1147' MSL. Tower
2.57 NM from departure end of runway, 3271' right of
centerline, 168' AGL/1198' MSL.

Rwy 20, multiple trees beginning 64' from departure end
of runway, 204' right of centerline up to 100' AGL/693'
MSL. Multiple buildings and antenna on tower
beginning 2641' from departure end of runway, 909' right
of centerline, up to 121' AGL/721' MSL. Multiple trees
beginning 125' from departure end of runway, 220' left of
centerline, up to 100' AGL/720' MSL.

BENTON HARBOR, MI

SOUTHWEST MICHIGAN RGNL (BEH)
AMDT 5 86212 (FAA)

TAKE-OFF MINIMUMS: **Rwy 9**, 300-1 or std. with min.
climb of 300' per NM to 1100. **Rwys 13, 18, 31, 36**,
300-1.

DEPARTURE PROCEDURE: **Rwy 27**, climb runway
heading to 1100 before turning.

BERRIEN SPRINGS, MI

ANDREW UNIVERSITY AIRPARK (C20)
ORIG 03023 (FAA)

TAKE-OFF MINIMUMS: **Rwys 3, 13, 21**, NA. **Rwy 31**,
700-1½ or std. with a min. climb of 260' per NM to 1500.
NA at night.

NOTE: **Rwy 31**, tower 6789' northeast of departure end of
runway, 565' AGL/1224' MSL.

BIG RAPIDS, MI

ROBEN-HOOD (RQB)
AMDT 5 96116 (FAA)

TAKE-OFF MINIMUMS: **Rwys 14, 27**, 300-1.

BOYNE FALLS, MI

BOYNE MOUNTAIN (BFA)
AMDT 3 96340 (FAA)

TAKE-OFF MINIMUMS: **Rwy 17**, 1000-1. **Rwy 35**, 500-1.
DEPARTURE PROCEDURE: **Rwys 17, 35**, climb runway
heading to 2000 before turning.

CADILLAC, MI

WEXFORD COUNTY (CAD)
AMDT 7 09183 (FAA)

TAKE-OFF MINIMUMS: **Rwys 18, 36**, NA-
Environmental.

DEPARTURE PROCEDURE: **Rwy 25**, climb heading
250° to 1800 before turning left.

NOTE: **Rwy 7**, trees beginning 783' from DER, 129' right
of centerline, up to 53' AGL/1348' MSL. Trees beginning
849' from DER, 348' left of centerline, up to 74' AGL/
1378' MSL. Poles beginning 1221' from DER, 596' left
of centerline, up to 30' AGL/1336' MSL. Poles beginning
1228' from DER, 366' right of centerline, up to 38' AGL/
1333' MSL. Train and tracks 1386' from DER, 819' left of
centerline, 23' AGL/1335' MSL. **Rwy 25**, bush 14' from
DER, 275' right of centerline, 10' AGL/1317' MSL.
Vehicle and road 660' from DER, 623' left of centerline,
15' AGL/1327' MSL.

CARO, MI

TUSCOLA AREA (CFS)
AMDT 1 08325 (FAA)

TAKE-OFF MINIMUMS: **Rwys 12, 30**, NA-
Environmental.

NOTE: **Rwy 5**, vehicle on highway 2163' from departure
end of runway, 648' left of centerline, 17' AGL/786' MSL.
Trees beginning 865' from departure end of runway, 248'
right of centerline, up to 100' AGL/809' MSL. **Rwy 23**,
trees beginning 990' from departure end of runway, 581'
right of centerline, up to 100' AGL/789' MSL.

CHARLEVOIX, MI

CHARLEVOIX MUNI (CVX)
AMDT 4 05020 (FAA)

TAKE-OFF MINIMUMS: **Rwys 4, 22**, N/A.

NOTES: **Rwy 9**, terrain beginning at departure end of
runway, left and right of centerline up to 660' MSL. **Rwy 27**,
terrain beginning at departure end of runway, left and
right of centerline up to 693' MSL.

CHARLOTTE, MI

FITCH H. BEACH (FPK)
AMDT 2 92065 (FAA)

TAKE-OFF MINIMUMS: **Rwys 2, 14, 20, 32**, 300-1.
DEPARTURE PROCEDURE: **Rwy 20**, climb runway
heading to 1500 before turning.

CHEBOYGAN, MI

CHEBOYGAN COUNTY (SLH)
AMDT 3 86156 (FAA)

TAKE-OFF MINIMUMS: **Rwys 9, 16**, 300-1.

CLARE, MI

CLARE MUNI (48D)

TAKE-OFF MINIMUMS: **Rwys 8, 13, 26, 31**, 300-1.

COLDWATER, MI

BRANCH COUNTY MEMORIAL (OEB)

AMDT 4 08101 (FAA)

TAKE-OFF MINIMUMS: **Rwys 16, 34**, NA -
Environmental.

NOTE: **Rwy 4**, vehicles on road and trees beginning 5' from departure end of runway, 92' right of centerline, up to 100' AGL/1059' MSL. Vehicles on road and trees beginning 347' from departure end of runway, 317' left of centerline, up to 100' AGL/1,059' MSL. **Rwy 7**, trees beginning 1246' from departure end of runway, 430' left of centerline, up to 100' AGL/1059' MSL. Vehicles on road and trees beginning 154' from departure end of runway, 315' right of centerline, up to 100' AGL/1039' MSL. Pole 336' from departure end of runway, 274' right of centerline, 18' AGL/977' MSL. **Rwy 22**, trains on railroad and trees beginning 769' from departure end of runway, 986' left to 945' right of centerline, up to 100' AGL/1099' MSL. **Rwy 25**, vehicles on road and trees beginning 1171' from departure end of runway, 394' left of centerline, up to 100' AGL/1,059' MSL. Trees beginning 732' from departure end of runway, 95' right of centerline, up to 100' AGL/1034' MSL.

DAVISON, MI

ATHELONE WILLIAMS MEMORIAL (6G0)

AMDT 2 97338 (FAA)

TAKE-OFF MINIMUMS: **Rwys 8, 26**, 300-1.**DETROIT, MI**

COLEMAN A. YOUNG MUNI (DET)

AMDT 6 07354 (FAA)

TAKE-OFF MINIMUMS: **Rwy 25**, 300-2 or std. w/ min. climb of 211' per NM to 1400, or alternatively, w/ standard takeoff minimums and a normal 200'/NM climb gradient, takeoff must occur no later than 1500' prior to departure end of runway.

DEPARTURE PROCEDURE: **Rwy 33**, climb heading 328° to 1800 before turning.

NOTE: **Rwy 7**, multiple trees beginning 232' from departure end of runway, 20' left of centerline, up to 60' AGL/687' MSL. Multiple trees beginning 283' from departure end of runway, 44' right of centerline, up to 56' AGL/680' MSL. Stack 533' from departure end of runway, 66' right of centerline, 50' AGL/671' MSL. Obstruction light on stack on building 566' from departure end of runway, 18' right of centerline, 50' AGL/671' MSL. Obstruction light on floodlight 622' from departure end of runway, 104' left of centerline, 41' AGL/668' MSL. Light standard 149' from departure end of runway, 138' left of centerline, 37' AGL/654' MSL. Light standard 227' from departure end of runway, 105' right of centerline, 33' AGL/654' MSL. Antenna on building 936' from departure end of runway, 84' right of centerline, 43' AGL/670' MSL. Obstruction light floodlight 909' from departure end of runway, 96' right of centerline, 41' AGL/668' MSL. Pole 466' from departure end of runway, 198' right of centerline, 30' AGL/654' MSL. Obstruction light on pole 132' from departure end of runway, on centerline, 16' AGL/637' MSL. **Rwy 15**, multiple trees beginning 589' from departure end of runway, 221' left of centerline, up to 69' AGL/683' MSL. Multiple trees beginning 299' from departure end of runway, 289' right of centerline, up to 52' AGL/679' MSL. Antenna on airport beacon 662' from departure end of runway, 667' left of centerline, 81' AGL/695' MSL. Pipe on obstruction light building 783' from departure end of runway, 597' left of centerline, 62' AGL/676' MSL. Obstruction light on building 1473' from departure end of runway, 556' right of centerline, 68' AGL/692' MSL. Tower 3376' from departure end of runway, 1118' right of centerline, 103' AGL/723' MSL. Antenna on building 803' from departure end of runway, 522' right of centerline, 35' AGL/656' MSL. Building 3749' from departure end of runway, 569' left of centerline, 114' AGL/723' MSL. Floodlight on building 1611' from departure end of runway, 657' left of centerline, 53' AGL/667' MSL. Rod on obstruction light building 450' from departure end of runway, 317' left of centerline, 20' AGL/637' MSL. **Rwy 25**, tower 2828' from departure end of runway, 1225' left of centerline, 141' AGL/770' MSL. Multiple trees beginning 909' from departure end of runway, 133' left of centerline, up to 76' AGL/703' MSL. Multiple trees beginning 334' from departure end of runway, 132' right of centerline, 58' AGL/685' MSL. Obstruction light on building 48' from departure end of runway, 240' left of centerline, 41' AGL/662' MSL. Railroad 1' from departure end of runway, 126' left of centerline, 29' AGL/650' MSL. Obstruction light on stack 454' from departure end of runway, 45' left of centerline, 35' AGL/659' MSL. Railroad 190' from departure end of runway, 40' left of centerline, 29' AGL/650' MSL. Obstruction light stack on building 949' from departure end of runway, 44' left of centerline, 41' AGL/668' MSL. Stack 958' from departure end of runway, 12' left of centerline, 41' AGL/668' MSL. Light standard 701' from departure end of runway, 145' right of centerline, 26' AGL/653' MSL. Stack 9474' from departure end of runway, 2415' left of centerline, 241' AGL/872' MSL.

COLEMAN A. YOUNG MUNI (CON'T)

Rwy 33, multiple trees beginning 113' from departure end of runway, 118' left of centerline, up to 73' AGL/694' MSL. Multiple trees beginning 572' from departure end of runway, 84' right of centerline, up to 92' AGL/709' MSL. Flag pole 963' from departure end of runway, 379' left of centerline, 28' AGL/658' MSL.

DETROIT METROPOLITAN/WAYNE COUNTY (DTW)

ORIG 06159 (FAA)

NOTE: **Rwy 3R**, headwall 399' from departure end of runway, 566' right of centerline, 17' AGL/647' MSL. **Rwy 4L**, multiple transmission towers 1516' from departure end of runway, 827' left of centerline, up to 60' AGL/690' MSL, multiple antennas 2751' from departure end of runway, 762' right of centerline, up to 84' AGL/714' MSL. **Rwy 4R**, antenna on building 3348' from departure end of runway, 1301' left of centerline, 100' AGL/736' MSL. **Rwy 9L**, multiple trees 968' to 2519' from departure end of runway, 462' left of centerline and 1173' right of centerline, up to 85' AGL/715' MSL. **Rwy 9R**, tree 1837' from departure end of runway, 947' right of centerline, 50' AGL/686' MSL. **Rwy 21L**, multiple trees 1079' to 3910' from departure end of runway, 586' left of centerline and 1188' right of centerline, up to 100' AGL/733' MSL. **Rwy 22L**, multiple trees 794' to 3694' from departure end of runway, 611' right of centerline and 1381' left of centerline, up to 110' AGL/740' MSL. **Rwy 27R**, rod on ASR 4461' from departure end of runway, 464' left of centerline, 106' AGL/756' MSL.

WILLOW RUN (YIP)

AMDT 9 07354 (FAA)

TAKE-OFF MINIMUMS: **Rwy 27R**, 200-1½ or std. w/ min. climb of 206' per NM to 1000.

NOTE: **Rwy 5L**, multiple trees beginning 1438' to 2887' from departure end of runway, from 119' to 438' left of centerline, up to 79' AGL/785' MSL. **Rwy 5R**, multiple trees beginning 1877' to 2472' from departure end of runway, from 134' to 922' left and right of centerline, up to 78' AGL/777' MSL. **Rwy 9R**, multiple trees beginning 827' to 2598' from departure end of runway, from 432' to 600' left and right of centerline, up to 77' AGL/780' MSL. **Rwy 23L**, tree 1304' from departure end of runway, 438' right of centerline, 42' AGL/757' MSL. Tree 2457' from departure end of runway, 720' left of centerline, 66' AGL/781' MSL. **Rwy 23R**, multiple trees and road with vehicle beginning 587' to 1333' from departure end of runway, from 282' to 814' left and right of centerline, up to 77' AGL/793' MSL. **Rwy 27L**, multiple trees and poles beginning 1273' to 2024' from departure end of runway, from 47' to 769' left and right of centerline, up to 90' AGL/805' MSL. **Rwy 27R**, railroad and lights beginning 564' to 1565' from departure end of runway, from 4' to 333' left of centerline, up to 54' AGL/770' MSL. Tree and lights beginning 102' to 1257' from departure end of runway, from 10' to 485' right of centerline, up to 55' AGL/771' MSL. Tower 7161' from departure end of runway, 502' left of centerline, 162' AGL/900' MSL. **Rwy 32**, multiple trees and poles beginning 701' to 1884' from departure end of runway, from 78' to 750' left of centerline, up to 84' AGL/798' MSL. Multiple trees 1157' to 1893' from departure end of runway, from 126' to 475' right of centerline, up to 66' AGL/780' MSL.

DETROIT/GROSSE ILE, MI

GROSSE ILE MUNI (ONZ)

AMDT 4 97198 (FAA)

TAKE-OFF MINIMUMS: **Rwys 4, 17, 22**, 300-1.

Rwy 35, 800-2 or 300-1 with a min. climb of 210' per NM to 1400.

DOWAGIAC, MI

DOWAGIAC MUNI (C91)

AMDT 4 80150 (FAA)

TAKE-OFF MINIMUMS: **Rwys 4, 9, 22, 27**, 400-1.

DEPARTURE PROCEDURE: **Rwys 4, 9, 22**, climb runway heading to 1500 before turning.

DRUMMOND ISLAND, MI

DRUMMOND ISLAND (DRM)

ORIG 82301 (FAA)

TAKE-OFF MINIMUMS: **Rwys 8, 26, 18, 36**, 300-1.

EAST TAWAS, MI

IOSCO COUNTY (6D9)

ORIG 81106 (FAA)

DEPARTURE PROCEDURE: **Rwys 8, 26**, climb runway heading to 1100 before turning.

EATON RAPIDS, MI

SKYWAY ESTATES (60G)

ORIG 90235 (FAA)

TAKE-OFF MINIMUMS: **Rwys 8, 26**, 300-1.

DEPARTURE PROCEDURE: **Rwys 8, 26**, climb runway heading to 2500 before turning.

ESCANABA, MI

DELTA COUNTY (ESC)

ORIG 09127 (FAA)

TAKE-OFF MINIMUMS: **Rwy 36**, 400-2¼ or std. w/ min. climb of 261' per NM to 1100.

NOTE: **Rwy 9**, vehicles on roadway at DER, 272' right of centerline, 15' AGL/607' MSL. Trees beginning 1013' from DER, 444' left of centerline, up to 100' AGL/690' MSL. Trees beginning 1185' from DER, 55' right of centerline, up to 100' AGL/690' MSL. **Rwy 18**, buildings 1' from DER, 480' right of centerline, up to 26' AGL/616' MSL. Fences 139' from DER, 402' right of centerline, up to 9' AGL/599' MSL. Pole 255' from DER, 563' right of centerline, 20' AGL/618' MSL. Trees beginning 329' from DER, 18' left of centerline, up to 100' AGL/664' MSL. Trees beginning 375' from DER, 19' right of centerline, up to 100' AGL/673' MSL. **Rwy 36**, tower 1.87 NM from DER, 2362' left of centerline, 293' AGL/915' MSL. Vehicles on roadway beginning 41' from DER, 40' right of centerline, 15' AGL/621' MSL. Trees beginning 349' from DER, 555' right of centerline, up to 100' AGL/697' MSL. Trees beginning 366' from DER, 2' left of centerline, up to 100' AGL/700' MSL.

FLINT, MI

BISHOP INTL (FNT)

AMDT 5 02052 (FAA)

NOTE: **Rwy 18**, trees 1200' from departure end of runway, 500' right of centerline, 65' AGL/863' MSL.

FRANKFORT, MI

FRANKFORT DOW MEMORIAL FIELD (FKS)
AMDT 2 97282 (FAA)

TAKE-OFF MINIMUMS: **Rwy 15**, 500-2 or std. with a min. climb of 360' per NM to 1300. **Rwy 33**, 300-2.

DEPARTURE PROCEDURE: **Rwy 33**, climb runway heading to 1500 before turning.

FREMONT, MI

FREMONT MUNI (FFX)
ORIG 09351 (FAA)

TAKE-OFF MINIMUMS: **Rwy 27**, 300-1½ or std. w/ a min climb of 211' per NM to 1100, or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, take-off must occur no later than 1400' prior to DER.

NOTE: **Rwy 9**, trees beginning 947' from DER, on centerline, up to 100' AGL/866' MSL. **Rwy 18**, trees beginning 1055' from DER, 763' right of centerline, up to 100' AGL/859' MSL. Pole 1140' from DER, 617' right of centerline, 27' AGL/784' MSL. Trees beginning 2276' from DER, 1029' left of centerline, up to 100' AGL/847' MSL. **Rwy 27**, trees beginning 816' from DER, 635' right of centerline, up to 100' AGL/876' MSL. Trees beginning 2640' from DER on centerline, up to 100' AGL/876' MSL. Trees beginning 1.18 NM from DER, 1830' right of centerline, up to 100' AGL/960' MSL. **Rwy 36**, terrain 81' from DER, 484' left of centerline, 774' MSL. Transmission poles beginning 1157' from DER, 728' left to 497' right of centerline, up to 40' AGL/ 817' MSL. Catenary 1564' from DER, 41' right of centerline, 37' AGL/814' MSL. Trees beginning 1584' from DER, 577' left to 412' right of centerline, up to 67' AGL/844' MSL.

GAYLORD, MI

GAYLORD RGNL (GLR)
ORIG 09127 (FAA)

NOTE: **Rwy 9**, trees beginning 917' from DER, 318' right of centerline, up to 57' AGL/1387' MSL. Trees beginning 918' from DER, 357' left of centerline, up to 79' AGL/ 1407' MSL. Ceilometer 166' from DER, 258' left of centerline, 4' AGL/1334' MSL. **Rwy 18**, powerline pylon 2125' from DER, 917' right of centerline, 79' AGL/1398' MSL. Bushes beginning 18' from DER, 255' left of centerline, up to 21' AGL/1338' MSL. **Rwy 27**, trees beginning 2870' from DER, 345' right of centerline, up to 83' AGL/1403' MSL. Tree 2906' from DER, 234' left of centerline, 75' AGL/1395' MSL. **Rwy 36**, trees and bush beginning 79' from DER, 191' left of centerline, up to 54' AGL/1374' MSL.

GLADWIN, MI

CHARLES ZETTEL MEMORIAL (GDW)
AMDT 2 97086 (FAA)

TAKE-OFF MINIMUMS: **Rwy 27**, 600-2.
Rwy 33, 500-2.

GRAND HAVEN, MI

GRAND HAVEN MEMORIAL AIRPARK (3GM)
AMDT 4 83272 (FAA)

TAKE-OFF MINIMUMS: **Rwys 18, 36**, 300-1.
DEPARTURE PROCEDURE: **Rwys 9, 18, 27, 36**, climb runway heading to 1100 before turning.

GRAND LEDGE, MI

ABRAMS MUNI (4D0)
AMDT 2 93147 (FAA)

TAKE-OFF MINIMUMS: **Rwys 18, 27, 36**, 300-1 or std. with a min. climb of 300' per NM to 1200.

GRAND RAPIDS, MI

GERALD R. FORD INTL (GRR)
AMDT 2 09183 (FAA)

NOTE: **Rwy 8L**, vehicle on road 20' from DER, 156' left of centerline, 15' AGL/794' MSL. Trees beginning 1419' from DER, 740' left of centerline, up to 100' AGL/859' MSL. **Rwy 17**, trees beginning 1382' from DER, 134' left of centerline, up to 100' AGL/929' MSL. Trees beginning 1389' from DER, 819' right of centerline, up to 100' AGL/899' MSL. **Rwy 26R**, terrain beginning 102' from DER, 381' right of centerline, up to 808' MSL. **Rwy 35**, vehicle on road 742' from DER, 675' left of centerline, up to 15' AGL/804' MSL. Trees beginning 2002' from DER, 715' left of centerline, up to 100' AGL/ 869' MSL. Trees beginning 1339' from DER, 7' right of centerline, up to 100' AGL/879' MSL.

GRAYLING, MI

GRAYLING AAF (GOV)
AMDT 2 97198 (FAA)

TAKE-OFF MINIMUMS: **Rwys 5, 14, 23, 32**, 300-1.

GREENVILLE, MI

GREENVILLE MUNI (6D6)
AMDT 2 02164 (FAA)

TAKE-OFF MINIMUMS: **Rwy 19**, 300-1.

HANCOCK, MI

HOUGHTON COUNTY MEMORIAL (CMX)
AMDT 2 89208 (FAA)

TAKE-OFF MINIMUMS: **Rwy 25**, 300-1.
DEPARTURE PROCEDURE: **Rwys 25, 31**, climb runway heading to 1500 before turning.

HARBOR SPRINGS, MI

HARBOR SPRINGS (MGN)
AMDT 2 08073 (FAA)

TAKE-OFF MINIMUMS: **Rwy 28**, 300-1½ or std. w/ min. climb of 295' per NM to 2000.

DEPARTURE PROCEDURE: **Rwy 10**, Climb heading 101° to 1400 before proceeding on course. **Rwy 28**, Climb heading 281° to 2000 before turning right.

NOTE: **Rwy 10**, trees beginning abeam departure end of runway, 350' right of centerline, up to 100' AGL/788' MSL. Vehicle and road beginning 188' from departure end of runway, left to right of centerline, up to 15' AGL/ 736' MSL. Trees beginning 1671' from departure end of runway, 720' left of centerline, up to 100' AGL/821' MSL. **Rwy 28**, trees beginning abeam departure end of runway, 398' left of centerline, up to 100' AGL/723' MSL. Trees beginning abeam departure end of runway, 313' right of centerline, up to 100' AGL/936' MSL. Vehicle and road beginning abeam departure end of runway, left to right of centerline, up to 15' AGL/720' MSL.

HASTINGS, MI

HASTINGS (9D9)
ADMT 4 95117 (FAA)

TAKE-OFF MINIMUMS: **Rwys 9, 12, 18, 27**, 300-1.

HILLSDALE, MI

HILLSDALE MUNI (JYM)

ORIG 97310 (FAA)

TAKE-OFF MINIMUMS: **Rwy 10**, 300-1.**HOLLAND, MI**

TULIP CITY (BIV)

AMDT 1 09183 (FAA)

NOTE: **Rwy 8**, vehicles on road beginning 48' from DER, 500' right of centerline, up to 15' AGL/694' MSL. Trees beginning 1828' from DER, 829' left of centerline, up to 72' AGL/741' MSL. **Rwy 26**, vehicles on road beginning 86' from DER, 517' left of centerline, up to 15' AGL/714' MSL, pole 805' from DER, 475' left of centerline, 35' AGL/734' MSL, trees 1056' from DER, 468' left of centerline, up to 41' AGL/740' MSL.

HOUGHTON LAKE, MI

ROSCOMMON COUNTY-BLODGETT

MEMORIAL (HTL)

AMDT 1 07298 (FAA)

TAKE-OFF MINIMUMS: **Rwy 9**, 200-1¼, or std. w/min. climb of 237' per NM to 1400. **Rwys 18, 36**, NA-ATC. DEPARTURE PROCEDURE: **Rwy 27**, climb heading 274° to 2600 before turning south.

NOTE: **Rwy 9**, multiple trees beginning 2330' from departure end of runway, on centerline, up to 71' AGL/1216' MSL. Multiple trees beginning 5927' from departure end of runway 275' left of centerline, up to 100' AGL/1299' MSL. Terrain beginning 31' from departure end of runway, 215' right of centerline, up to 0' AGL/1165' MSL. Terrain beginning 43' from departure end of runway, 84' left of centerline, up to 0' AGL/1162' MSL. **Rwy 27**, multiple trees beginning 791' from departure end of runway, on centerline, up to 90' AGL/1239' MSL. Fence and road beginning 323' from departure end of runway, on centerline, up to 15' AGL/1164' MSL. Terrain beginning 100' from departure end of runway, 171' right of centerline, up to 0' AGL/1165' MSL. Terrain beginning 112' from departure end of runway, 128' left of centerline, up to 0' AGL/1162' MSL.

HOWELL, MI

LIVINGSTON COUNTY SPENCER J. HARDY

(OWZ)

AMDT 3 06215 (FAA)

NOTE: **Rwy 31**, multiple trees and light pole beginning 138' from departure end of runway, 334' right of centerline, up to 88' AGL/1030' MSL. Multiple trees beginning 914' from departure end of runway, 483' left of centerline, up to 83' AGL/1012' MSL. **Rwy 13**, tree 1776' from departure end of runway, 696' right of centerline, 70' AGL/1009' MSL.

IONIA, MI

IONIA COUNTY (Y70)

ORIG 83230 (FAA)

DEPARTURE PROCEDURE: **Rwys 9, 18, 27, 36**, climb runway heading to 1400 before turning.

IRON MOUNTAIN-KINGSFORD, MI

FORD (IMT)

AMDT 5 09071 (FAA)

TAKE-OFF MINIMUMS: **Rwy 13**, 300-1 or std. w/min. climb of 590' per NM to 1400. **Rwy 31**, 300-1¼ or std. w/min. climb of 260' per NM to 1400.

DEPARTURE PROCEDURE: **Rwy 1**, climb heading 010° to 1700 before turning right. **Rwy 13**, climb heading 134° to 1900 before turning left.

NOTE: **Rwy 1**, trees and bushes beginning 526' from DER, 292' right of centerline, up to 79' AGL/1259' MSL. Antenna, trees and bushes beginning 378' from DER, 192' left of centerline, up to 76' AGL/1276' MSL. **Rwy 13**, tree 1276' from DER, 312' right of centerline, 88' AGL/1188' MSL. Trees and poles beginning 547' from DER, 100' left of centerline, up to 86' AGL/1306' MSL. **Rwy 19**, trees beginning 992' from DER, 245' right of centerline, up to 56' AGL/1192' MSL. Trees beginning 1229' from DER, 376' left of centerline, up to 48' AGL/1183' MSL. **Rwy 31**, trees 1711' from DER, 113' right of centerline, 66' AGL/1186' MSL. Bush 165' from DER, 161' right of centerline, 11' AGL/1131' MSL. Trees beginning 66' from DER, 182' left of centerline, up to 95' AGL/1315' MSL.

IRONWOOD, MI

GOGEBIC-IRON COUNTY (IWD)

AMDT 6 09127 (FAA)

DEPARTURE PROCEDURE: **Rwy 9**, climb heading 090° to 2300 before turning right. **Rwy 27**, climb heading 270° to 1700 before turning left.

NOTE: **Rwy 9**, trees beginning 61' from DER, 544' left of centerline, up to 31' AGL/1244' MSL. Tree 1853' from DER, 972' left of centerline, 100' AGL/1346' MSL.

Rwy 27, vehicle on road 287' from DER, 2' right of centerline, 15' AGL/1237' MSL. Tree 1946' from DER, 952' right of centerline, 69' AGL/1283' MSL. Tree 2817' from DER, 588' left of centerline, 74' AGL/1304' MSL.

JACKSON, MI

JACKSON COUNTY-REYNOLDS FIELD (JXN)

AMDT 5 09295 (FAA)

NOTE: **Rwy 6**, antenna 3131' from DER, 1331' left of centerline, 75' AGL/1075' MSL. **Rwy 14**, tank 2617' from DER, 373' left of centerline, 107' AGL/1107' MSL. Antenna 3102' from DER, 597' left of centerline, 111' AGL/1111' MSL. Trees beginning 1137' from DER, 8' left of centerline, up to 84' AGL/1083' MSL. Trees and poles beginning 518' from DER, 13' right of centerline, up to 114' AGL/1113' MSL. Road plus vehicle 541' from DER, 245' right of centerline, 15' AGL/1015' MSL.

Rwy 24, trees and poles beginning 367' from DER, 48' left of centerline, up to 80' AGL/1079' MSL. Buildings beginning 125' from DER, 372' left of centerline, 23' AGL/1022' MSL. Fence beginning 88' from DER, 247' right of centerline, 10' AGL/1002' MSL. Road plus vehicle 306' from DER, 3' right of centerline, 15' AGL/1007' MSL. Trees beginning 1231' from DER, 232' right of centerline, up to 62' AGL/1051' MSL. Localizer obstruction light 140' from DER, on centerline, 10' AGL/999' MSL. **Rwy 32**, trees and poles beginning 169' from DER, 69' left of centerline, up to 104' AGL/1093' MSL. Fence beginning 475' from DER, 148' left of centerline, up to 10' AGL/985' MSL. Trees beginning 94' from DER, 5' right of centerline, up to 103' AGL/1092' MSL. Fence beginning 278' from DER, 367' right of centerline, up to 10' AGL/999' MSL.



TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

09351

KALAMAZOO, MI

KALAMAZOO/BATTLE CREEK INTL (AZO)

AMDT 9 07242 (FAA)

NOTE: **Rwy 5**, light pole 906' from departure end of runway, 511' left of centerline, 25' AGL/879' MSL. Multiple trees beginning 1433' from departure end of runway, 90' left of centerline, up to 65' AGL/914' MSL. Multiple towers beginning 2399' from departure end of runway, 331' right of centerline, up to 119' AGL/970' MSL. Multiple trees beginning 156' from departure end of runway, 163' right of centerline, up to 78' AGL/917' MSL. **Rwy 9**, multiple trees beginning 588' from departure end of runway, on centerline, up to 104' AGL/958' MSL. Antenna 2187' from departure end of runway, 222' right of centerline, 69' AGL/928' MSL. Tree 677' from departure end of runway, 214' right of centerline, 45' AGL/899' MSL. **Rwy 17**, railroad 587' from departure end of runway, 613' left of centerline, 17' AGL/885' MSL. Tree 691' from departure end of runway, 583' right of centerline, 57' AGL/894' MSL. **Rwy 23**, multiple trees beginning 937' from departure end of runway, 50' left of centerline, up to 72' AGL/956' MSL. Multiple poles and hangar beginning 22' from departure end of runway, 331' right of centerline, up to 24' AGL/905' MSL. Multiple trees beginning 943' from departure end of runway, 144' right of centerline, up to 107' AGL/986' MSL. **Rwy 27**, road 543' from departure end of runway, on centerline, 15' AGL/890' MSL. Multiple trees beginning 414' from departure end of runway, 292' left of centerline, up to 23' AGL/972' MSL. Multiple light poles and towers beginning 521' from departure end of runway, 18' right of centerline, up to 180' AGL/1015' MSL. Multiple trees beginning 1012' from departure end of runway, 23' right of centerline, up to 75' AGL/969' MSL. **Rwy 35**, multiple trees beginning 2319' from departure end of runway, 163' left of centerline, up to 75' AGL/934' MSL. Multiple trees beginning 1961' from departure end of runway, 753' right of centerline, up to 77' AGL/936' MSL.

LAKEVIEW, MI

LAKEVIEW AIRPORT-GRIFFITH FIELD (13C)

ORIG 98281 (FAA)

TAKE-OFF MINIMUMS: **Rwy 27**, 300-1 or std. with a min. climb of 400' per NM to 1200.

NOTE: **Rwy 9**, 1018' tree 50' from departure end of runway, 490' right of centerline.

LAMBERTVILLE, MI

TOLEDO SUBURBAN (DUH)

AMDT 1 80360 (FAA)

TAKE-OFF MINIMUMS: **Rwys 9, 27**, 300-1.

LANSING, MI

CAPITAL CITY (LAN)

AMDT 13 93147 (FAA)

TAKE-OFF MINIMUMS: **Rwys 6, 10L, 24, 28R**, 300-1.

DEPARTURE PROCEDURE: **Rwys 10L, 10R**, climb runway heading to 2000 before turning south.

Rwys 6, 24, 28L, 28R, climb runway heading to 1500 before turning southeast.

LAPEER, MI

DUONT-LAPEER (D95)

AMDT 3 86156 (FAA)

TAKE-OFF MINIMUMS: **Rwys 9, 27**, 300-1.

LINDEN, MI

PRICE'S (9G2)

AMDT 4 98085 (FAA)

TAKE-OFF MINIMUMS: **Rwy 36**, NA.

LUDINGTON, MI

MASON COUNTY (LDM)

AMDT 6 92233 (FAA)

TAKE-OFF MINIMUMS: **Rwys 1, 19, 26**, 300-1.

MACKINAC ISLAND, MI

MACKINAC ISLAND (MCD)

AMDT 1 80164 (FAA)

DEPARTURE PROCEDURE: **Rwy 8**, climb runway heading to 1100 before turning right.

MASON, MI

MASON JEWETT FIELD (TEW)

AMDT 2 93035 (FAA)

TAKE-OFF MINIMUMS: **Rwy 9**, 300-1.

MENOMINEE, MI

MENOMINEE-MARINETTE TWIN COUNTY

(MNM)

AMDT 3 09239 (FAA)

NOTE: **Rwy 3**, trees and bush beginning 196' from DER, 340' left of centerline, up to 100' AGL/719' MSL.

Multiple trees beginning 1568' from DER, 702' right of centerline, up to 100' AGL/759' MSL. **Rwy 14**, multiple trees, poles, and building beginning 451' from DER, 85' left of centerline, up to 135' AGL/735' MSL. Multiple trees and pole beginning 651' from DER, 171' right of centerline, up to 100' AGL/704' MSL. **Rwy 21**, multiple trees beginning 932' from DER, 469' left of centerline, up to 77' AGL/677' MSL. Multiple trees beginning 1808' from DER, 701' right of centerline, up to 65' AGL/685' MSL. **Rwy 32**, multiple trees beginning 64' from DER, 71' left of centerline, up to 100' AGL/739' MSL. Multiple trees beginning 875' from DER, 15' right of centerline, up to 100' AGL/759' MSL.

MIDLAND, MI

JACK BARSTOW (IKW)

ORIG 09183 (FAA)

NOTE: **Rwy 6**, trees beginning 56' from DER, 493' right of centerline, up to 25' AGL/655' MSL. Trees beginning 920' from DER, 47' left of centerline, up to 20' AGL/660' MSL. Trees beginning 1144' from DER, from right to left of centerline, up to 100' AGL/754' MSL. Pole 1495' from DER, 331' right of centerline, 37' AGL/672' MSL. **Rwy 18**, trees beginning 339' from DER, 279' left of centerline, up to 100' AGL/729' MSL. Trees beginning 358' from DER, 306' right of centerline, up to 100' AGL/724' MSL. **Rwy 24**, vehicles on road beginning 225' from DER, from right to left of centerline, up to 15' AGL/634' MSL. Trees beginning 510' from DER, 103' right of centerline, up to 100' AGL/710' MSL. Trees beginning 787' from DER, 152' left of centerline, up to 100' AGL/709' MSL. **Rwy 36**, trees beginning 105' from DER, 200' right of centerline, up to 100' AGL/744' MSL. Trees beginning 147' from DER, 242' left of centerline, up to 100' AGL/729' MSL.

MONROE, MI

CUSTER (TTF)

AMDT 6 08213

NOTE: **Rwy 21**, Trees and light poles beginning 81' from departure end of runway, 9' right of centerline, up to 122' AGL/736' MSL. Trees and light poles beginning 243' from departure end of runway, 218' left of centerline, up to 98' AGL/707' MSL. Road and vehicle beginning 1954' from departure end of runway, on centerline, 15' AGL/626' MSL.

MOUNT PLEASANT, MI

MOUNT PLEASANT MUNI (MOP)

AMDT 5 09239 (FAA)

TAKE-OFF MINIMUMS: **Rwys 5, 23**, NA-Environmental.

NOTE: **Rwy 9**, trees beginning 420' from DER, 512' right of centerline, up to 86' AGL/845' MSL. Trees beginning 420' from DER, 266' left of centerline, up to 23' AGL/836' MSL. **Rwy 27**, trees beginning 1115' from DER, 39' right of centerline, up to 99' AGL/858' MSL. Trees beginning 1025' from DER, 3' left of centerline, up to 108' AGL/867' MSL.

MUSKEGON, MI

MUSKEGON COUNTY (MKG)

AMDT 10 09015 (FAA)

NOTE: **Rwy 6**, tree 1700' from departure end of runway, 600' right of centerline, 25' AGL/672' MSL. Multiple trees beginning 1980' from departure end of runway, 300' left of centerline, up to 75' AGL/709' MSL. **Rwy 14**, pole 1040' from departure end of runway, 700' left of centerline, 25' AGL/655' MSL. Multiple poles beginning 1500' from departure end of runway, 880' right of centerline, up to 50' AGL/677' MSL. Tree 1900' from departure end of runway, 940' left of centerline, 79' AGL/709' MSL. **Rwy 24**, bush 124' from departure end of runway, 480' left of centerline, 19' AGL/630' MSL. Tree 500' from departure end of runway, 300' right of centerline, 42' AGL/649' MSL. Tree 1210' from departure end of runway, 450' left of centerline, 42' AGL/653' MSL. Antenna 1220' from departure end of runway, 500' right of centerline, 43' AGL/654' MSL. Multiple trees beginning 2200' from departure end of runway, 50' left of centerline, up to 86' AGL/697' MSL. **Rwy 32**, tree 1040' from departure end of runway, 740' right of centerline, 65' AGL/659' MSL. Tree 1190' from departure end of runway, 500' left of centerline, 65' AGL/663' MSL. Tree 1270' from departure end of runway, 800' left of centerline, 89' AGL/690' MSL.

NEW HUDSON, MI

OAKLAND SOUTHWEST (Y47)

AMDT 2 88350 (FAA)

TAKE-OFF MINIMUMS: **Rwys 7, 25**, 300-1.

NILES, MI

JERRY TYLER MEMORIAL (3TR)

AMDT 5 85353 (FAA)

TAKE-OFF MINIMUMS: **Rwys 3, 14, 21, 32**, 300-1.

DEPARTURE PROCEDURE: **Rwys 3, 14**, climb runway heading to 1400 before turning. **Rwy 21**, left turn climb heading 180° to 1400 before turning. **Rwy 32**, right turn climb heading 360° to 1400 before turning.

ONTONAGON, MI

ONTONAGON COUNTY-SCHUSTER FIELD (OGM)

AMDT 1 86072 (FAA)

TAKE-OFF MINIMUMS: **Rwys 17, 35**, 300-1.

OSCODA, MI

OSCODA-WURTHSMITH (OSC)

ORIG 08157 (FAA)

NOTE: **Rwy 6**, Trees beginning 3096' from departure end of runway, 967' left of centerline up to 100' AGL/719' MSL. **Rwy 24**, Trees beginning 2192' from departure end of runway, 578' right of centerline up to 100' AGL/739' MSL. Trees beginning 1415' from departure end of runway, 559' left of centerline, up to 100' AGL/739' MSL.

OWOSSO, MI

OWOSSO COMMUNITY (RNP)

AMDT 4 08213 (FAA)

TAKE-OFF MINIMUMS: **Rwys 6, 18, 24, 36**, NA-Environmental.

NOTE: **Rwy 10**, bush 187' from departure end of runway, 158' right of centerline, 3' AGL/742' MSL. Trees beginning 1136' from departure end of runway, 630' left of centerline, up to 75' AGL/814' MSL. Trees and pole beginning 1111' from departure end of runway, 596' right of centerline, up to 90' AGL/829' MSL. Powerline with towers beginning 2029' from departure end of runway, left and right of centerline, 90' AGL/829' MSL. **Rwy 28**, bush 212' from departure end of runway, 436' right of centerline, 11' AGL/741' MSL. Vent, trees, and a building beginning 266' from departure end of runway, 46' left of centerline, up to 100' AGL/836' MSL. Trees and a pole beginning 1184' from departure end of runway, 244' right of centerline, up to 60' AGL/815' MSL.

PELLSTON, MI

PELLSTON RGNL AIRPORT OF EMMET
COUNTY (PLN)

AMDT 4 09183 (FAA)

TAKE-OFF MINIMUMS: **Rwy 23**, std. w/ a min. climb of 260' per NM to 1800, or 1000-2½ for climb in visual conditions. **Rwy 32**, std. w/ a min. climb of 290' per NM to 1100, or 1000-2½ for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwys 23, 32**, for climb in visual conditions: cross Pellston Rgnl airport of Emmet County at or above 1600.

NOTE: **Rwy 5**, vehicle on road 411' from DER, 588' left of centerline, 15' AGL/738' MSL. Trees beginning 1070' from DER, 12' left of centerline, up to 100' AGL/838' MSL. Railroad 810' from DER, 672' right of centerline, 23' AGL/744' MSL. Trees beginning 1001' from DER, 288' right of centerline, up to 100' AGL/821' MSL.

Rwy 14, trees beginning 1290' from DER, 814' left of centerline, up to 100' AGL/805' MSL. **Rwy 23**, vehicle on road 14' from DER, 463' left of centerline, 15' AGL/720' MSL. Trees beginning 476' from DER, 53' left of centerline, up to 100' AGL/805' MSL. Trees beginning 953' from DER, 240' right of centerline, up to 100' AGL/820' MSL. Tree 2.97 NM from DER, 2771' right of centerline, 100' AGL/1297' MSL. **Rwy 32**, bush 107' from DER, 309' right of centerline, 4' AGL/722' MSL. Vehicle on road 1213' from DER, 809' right of centerline, 15' AGL/752' MSL. Terrain 2127' from DER, 715' right of centerline, 775' MSL. Trees beginning 4336' from DER, 315' right of centerline, up to 100' AGL/872' MSL. Trees beginning 1932' from DER, 20' left of centerline, up to 100' AGL/996' MSL.

PLYMOUTH, MI

CANTON-PLYMOUTH-METTETAL (1D2)

TAKE-OFF MINIMUMS: **Rwys 18, 36**, 300-1.

PONTIAC, MI

OAKLAND COUNTY INTL (PTK)

AMDT 5 09295 (FAA)

TAKE-OFF MINIMUMS: **Rwys 17, 35**, NA-Environmental.

NOTE: **Rwy 9L**, hangars beginning 203' from DER, 511' left of centerline, up to 30' AGL/1000' MSL. **Rwy 9R**, multiple trees beginning 1382' from DER, 647' left of centerline, up to 41' AGL/1011' MSL. Antenna on hangar 870' from DER, 732' right of centerline, 36' AGL/1006' MSL. **Rwy 27L**, trees 452' from DER, 331' right of centerline, 23' AGL/1002' MSL. Vehicle on road 388' from DER, 15' right of centerline, 15' AGL/992' MSL. Multiple trees beginning 449' from DER, 60' left of centerline, up to 76' AGL/1046' MSL. **Rwy 27R**, multiple trees beginning 451' from DER, 2' right of centerline, up to 62' AGL/1041' MSL. Vehicle on road 416' from DER, 24' right of centerline, 15' AGL/992' MSL. Multiple trees beginning 387' from DER, 19' left of centerline, up to 36' AGL/1015' MSL.

PORT HURON, MI

ST. CLAIR COUNTY INTL (PHN)

AMDT 5 96060 (FAA)

TAKE-OFF MINIMUMS: **Rwys 4, 10, 28**, 300-1.

ROGERS CITY, MI

PRESQUE ISLE COUNTY (PZQ)

AMDT 1 86268 (FAA)

TAKE-OFF MINIMUMS: **Rwys 9, 27**, 300-1.

ROMEO, MI

ROMEO STATE (D98)

AMDT 4 08101 (FAA)

NOTE: **Rwy 18**, Vehicle on roadway 364' from departure end of runway, on centerline, 15' AGL/744' MSL. Trees beginning 1360' from departure end of runway, 854' left of centerline, up to 100' AGL/825' MSL. **Rwy 36**, Vehicle on roadway 579' from departure end of runway, on centerline, 15' AGL/759' MSL. Trees beginning 955' from departure end of runway, left and right of centerline, up to 100' AGL/845' MSL.

SAGINAW, MI

MBS INTL (MBS)

ORIG 86240 (FAA)

DEPARTURE PROCEDURE: **Rwys 5, 23**, climb runway heading to 1100 before turning.

SAGINAW COUNTY H.W. BROWNE (HYX)

AMDT 7 86128 (FAA)

TAKE-OFF MINIMUMS: **Rwys 5, 9, 23, 27**, 400-1.

DEPARTURE PROCEDURE: **Rwy 9**, climb runway heading to 2100 before turning North. **Rwys 23, 27**, climb runway heading to 2100 before turning Northeast. **Rwy 5**, right turn climb heading 090° to 2100 before turning North.

SAULT STE MARIE, MI

CHIPPEWA COUNTY INTL (CIU)

ORIG 09295 (FAA)

NOTE: **Rwy 9**, buildings beginning 453' from DER, 519' right of centerline, up to 30' AGL/829' MSL. Building 723' from DER, 461' left of centerline, up to 30' AGL/829' MSL. Trees beginning 1838' from DER, 23' right of centerline, up to 100' AGL/899' MSL.

Rwy 16, trees beginning 3645' from DER, extending from 1018' right of centerline to 1221' left of centerline, up to 100' AGL/899' MSL. **Rwy 27**, vehicle on road, 412' from DER, 510' left of centerline, up to 15' AGL/804' MSL. Trees beginning 520' from DER, extending from 581' left of centerline to 827' right of centerline, up to 100' AGL/879' MSL.

SELFRIDGE ANGB (KMTC)

MT. CLEMENS, MIAMDT 1,
09015

Rwy 19*

Rwy 1, 300-1¼**

* Standard with a CG of 260'/NM to 1600.

** Or standard with CG of 280'/NM to 1000.

DEPARTURE PROCEDURE: **Rwy 19**, For climb in visual conditions: Ceiling 1300'/ Visibility 2½ SM, remain within 5.6 NM of KMTC airport, cross KMTC airport at or above 1700 before proceeding on course. Max airspeed 250 KIAS. **Rwy 1**, Standard with minimum climb of 280'/NM to 1000 or 300-1¼.

TAKE-OFF OBSTACLES: **Rwy 19**: Powerpoles 2274' from DER 38' right of centerline, 36' AGL/616' MSL. Trees 3310' from DER 929' right of centerline, 80' AGL/660' MSL. **Rwy 1**: Rising terrain 6' out to 237' from DER beginning 500' out to 563' left of centerline, up to 585' MSL (up to 6' above Thr). Fence from 68' out to 220' from DER beginning 341' to 523' right of centerline, 10' AGL/595' MSL. Trees starting 3043' out to 3099' from DER beginning 451' to 927' right of centerline, 80' AGL/660' MSL. Trees starting 2334' out to 3059' from DER beginning 1057' to 1105' left of centerline, 80' AGL/660' MSL. Vehicle 1560' from DER 427' left of centerline, 15' AGL/600' MSL. West bracket reflector 997' from DER 226' left of centerline, 15' AGL/592' MSL.

SOUTH HAVEN, MI

SOUTH HAVEN AREA RGNL (LWA)
AMDT 2 91234 (FAA)
TAKE-OFF MINIMUMS: **Rwys 4, 14, 32**, 300-1.

SPARTA, MI

PAUL C. MILLER-SPARTA (8D4)
TAKE-OFF MINIMUMS: **Rwys 7, 25**, 300-1.

STURGIS, MI

KIRSCH MUNI (IRS)
AMDT 2 96256 (FAA)
TAKE-OFF MINIMUMS: **Rwy 6, 24**, 300-1.

TECUMSEH, MI

MEYERS-DIVER'S (3TE)
AMDT 2 96004 (FAA)
TAKE-OFF MINIMUMS: **Rwy 9**, 300-1.

TRAVERSE CITY, MI

CHERRY CAPITAL (TVC)
AMDT 9 98169 (FAA)
TAKE-OFF MINIMUMS: **Rwys 18, 36**, 300-1.
Rwy 28, 700-2 or std. with min. climb of 300' per NM to 2000.
DEPARTURE PROCEDURE: **Rwys 10, 18, 36**, climb runway heading to 2000 before proceeding on course. **Rwy 28**, climbing left turn heading 240° to 2000 before proceeding on course.

TROY, MI

OAKLAND/TROY (VLL)
AMDT 3 92289 (FAA)
TAKE-OFF MINIMUMS: **Rwy 27**, 300-1.
DEPARTURE PROCEDURE: **Rwys 9, 27**, climb runway heading to 1200 before turning.

WEST BRANCH, MI

WEST BRANCH COMMUNITY (Y31)
AMDT 2 97086 (FAA)
TAKE-OFF MINIMUMS: **Rwy 27**, 500-2.

ADG NDB
278APP CRS
042°

Rwy Idg	5001
TDZE	798
Apt Elev	798

NDB RWY 5
ADRIAN / LENAWEE COUNTY (ADG)



A NA

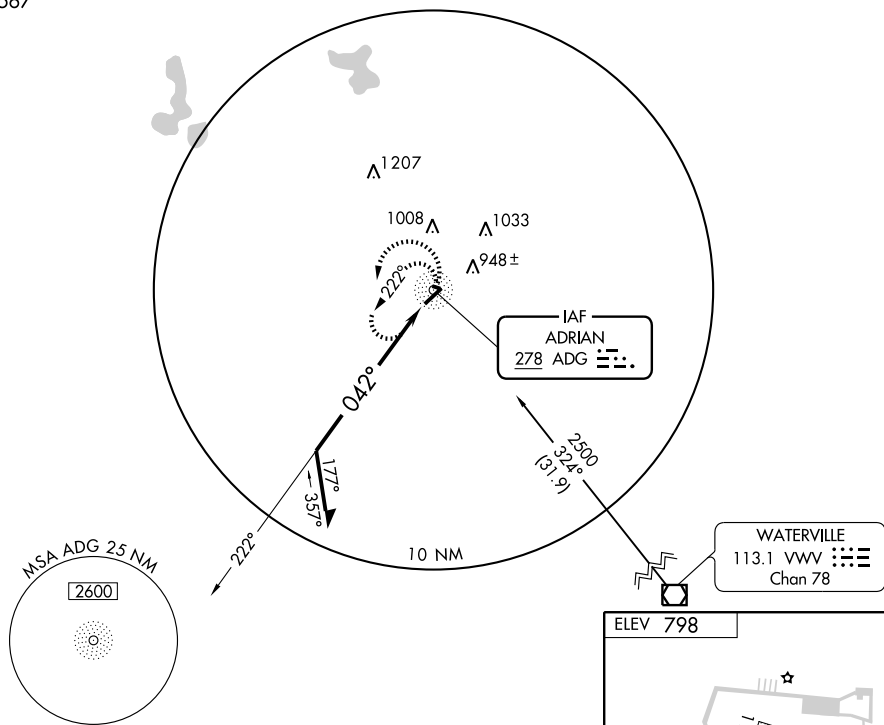
MISSED APPROACH: Climbing left turn to 2500 in ADG NDB holding pattern.

ASOS
118,375

TOLEDO APP CON
134.35 317.55

UNICOM
122.8 (CTAF) **L**

1567



Remain
within 10 NM

NDB

2500

202°

0420

2500

ADG
278

ELEV 798

TDZ
79

—

042° to
ADG NDB

HIRL Rwy 5-23 **L**

CATEGORY	A		B		C		D		ADG NDB					
S-5	1380-1 582 (600-1)		1380-1½ 582 (600-1½)		1380-1¾ 582 (600-1¾)		HIRL Rwy 5-23 ⓘ							
CIRCLING	1380-1 582 (600-1)		1380-1½ 582 (600-1½)		1380-2 582 (600-2)		Knots	60	90	120	150	180		
							Min:Sec							

WAAS CH 42603 W05A	APP CRS 053°	Rwy Idg TDZE Apt Elev	5001 798 798
--	------------------------	-----------------------------	---

RNAV (GPS) RWY 5

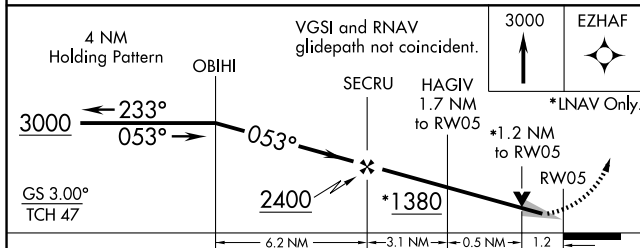
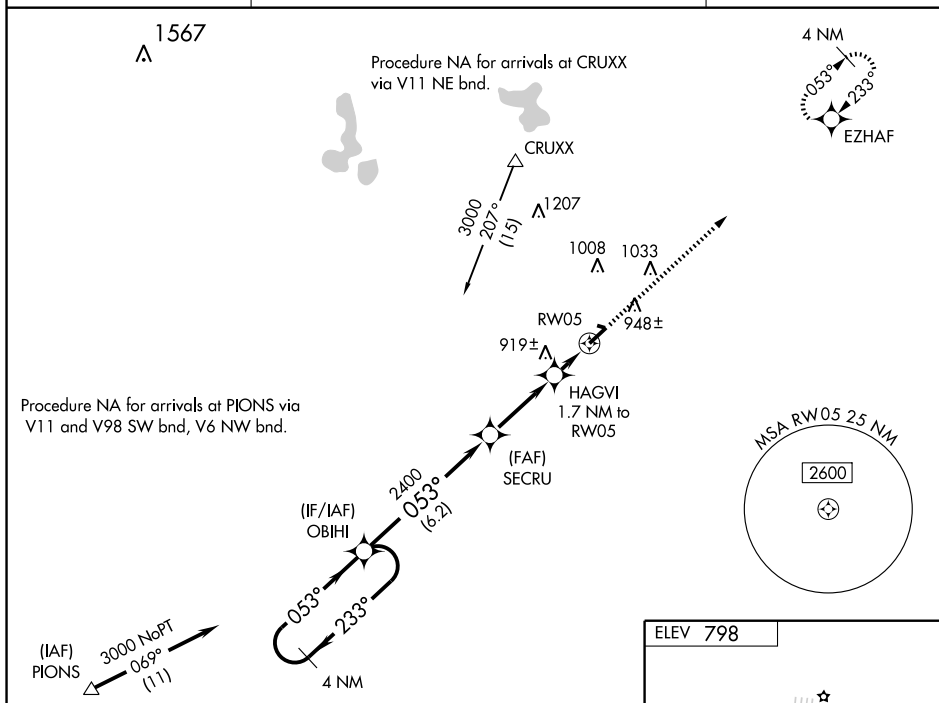
ADRIAN / LENAWEE COUNTY (ADG)

T For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP -0.3 NA. When local altimeter setting not received, use Ann Arbor Muni altimeter setting and increase all DAs 66 ft and all MDAs 80 ft, and increase LPV all Cats, LNAV Cat D and Circling Cat C visibility ¼ mile. Baro-VNAV and VDP NA when using Ann Arbor Muni altimeter setting.

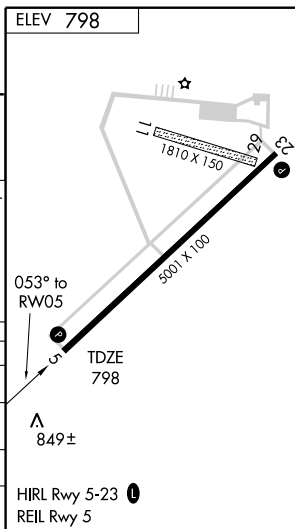
MISSED APPROACH: Climb to 3000 direct EZHAF and hold.

ASOS
118.375

TOLEDO APP CON
134.35 317.55

UNICOM
122.8 (CTAF) **L**

CATEGORY	A	B	C	D
LPV DA	1048- ³ / ₄ 250 (300- ³ / ₄)			
LNAV/ DA VNAV	1119-1 ¹ / ₄ 321 (400-1 ¹ / ₄)			
LNAV MDA	1200-1	402 (500-1)	1200-1 ¹ / ₄	402 (500-1 ¹ / ₄)
CIRCLING	1300-1 502 (600-1)	1320-1 522 (600-1)	1320-1 ¹ / ₂ 522 (600-1 ¹ / ₂)	1380-2 582 (600-2)



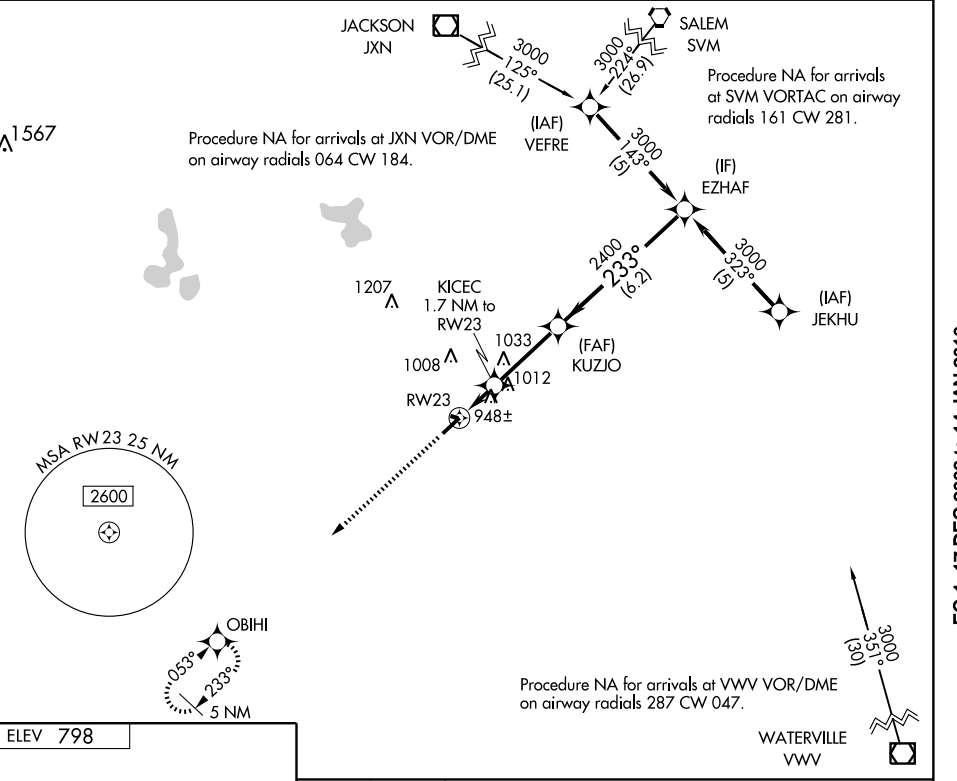
▼

▲

If local altimeter setting not received, use Ann Arbor Muni altimeter setting and increase all MDAs 80 feet.
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 3000 direct OBIHI and hold.

ASOS 118.375	TOLEDO APP CON 134.35 317.55	UNICOM 122.8 (CTAF) 0
-----------------	---------------------------------	--------------------------



	3000	OBIHI	VGS and descent angles not coincident.	EZHAF	3000	Procedure Turn NA
	RW23	KIJCEC 1.7 NM to RW23	KUZJO	233°	2400	
	1.7	3.1 NM	6.2 NM			
CATEGORY	A	B	C	D		
LNAV MDA	1260-1	462 (500-1)	1260 -1¼ 462 (500-1¼)	1260-1½ 462 (500-1½)		
CIRCLING	1300-1 502 (600-1)	1320-1 522 (600-1)	1320-1 522 (600-1½)	1380-2 582 (600-2)		

VOR/DME PMM 112.1 Chan 58	APP CRS 254°	Rwy Idg 4300 TDZE 704 Apt Elev 708
---	------------------------	---

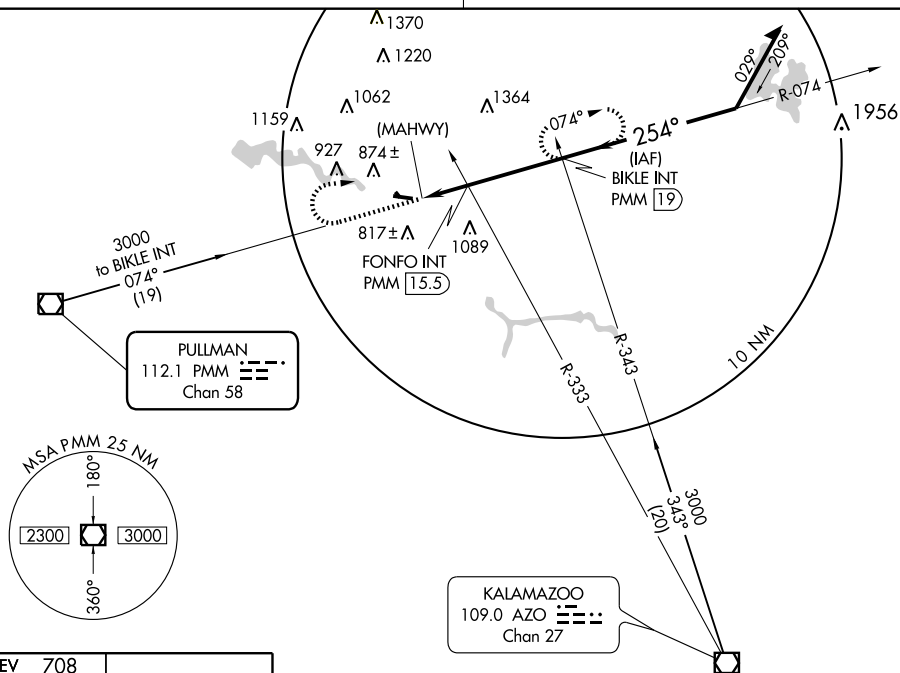
VOR or GPS RWY 29

ALLEGAN / PADGHAM FIELD (35D)

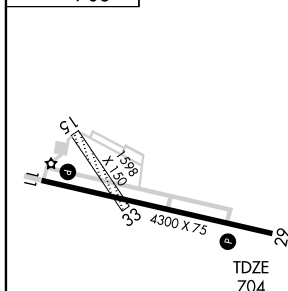
T	Obtain local altimeter setting on CTAF; when not received, use Grand Rapids altimeter setting and increase all MDAs 100 feet and all visibilities $\frac{1}{4}$ mile.
A NA	

MISSED APPROACH: Climb to 3000 then right turn
via PMM R-074 to BIKLE Int/PMM 19 DME and hold.

GRAND RAPIDS APP CON ★
128.4 257.6

UNICOM
122.8 (CTAF) **L**

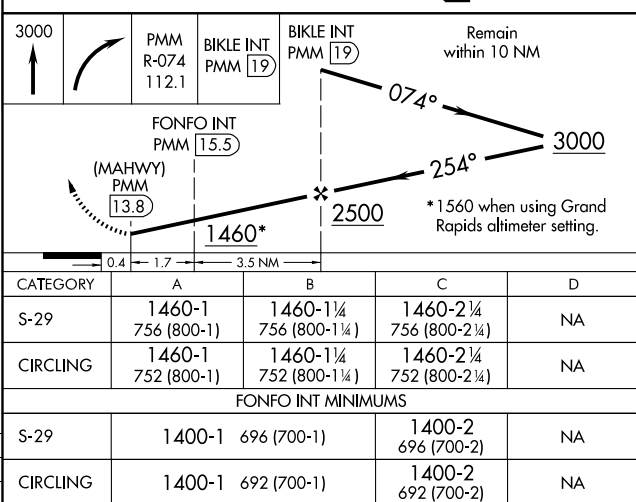
ELEV	708
------	-----



REIL Rwy 29 **L**
REIL Rwy 11
MIRL Rwy 11-29 **L**

FAF to MAP 5.2 NM

Knots	60	90	120	150	180
Min:Sec	5:12	3:28	2:36	2:05	1:44



APP CRS 095°	Rwy Idg TDZE Apt Elev	4999 752 754
------------------------	-----------------------------	---

RNAV (GPS) RWY 9

ALMA/ GRATIOT COMMUNITY (AMN)

T	GPS or RNP-0.3 required.
A NA	DME/DME RNP-0.3 NA. Circling NA at night to Rwy 18 and 36.

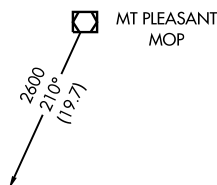
MISSED APPROACH: Climb to 2600 direct CEGEE WP and hold.

AWOS-3
124.175

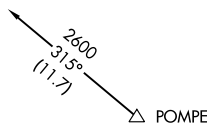
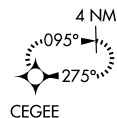
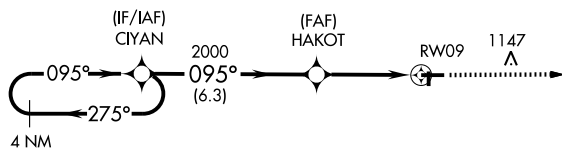
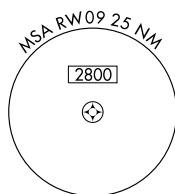
SAGINAW APP CON ★
126.45 235.625

CLNC DEL
119,25

UNICOM
122.8 (CTAF) **L**



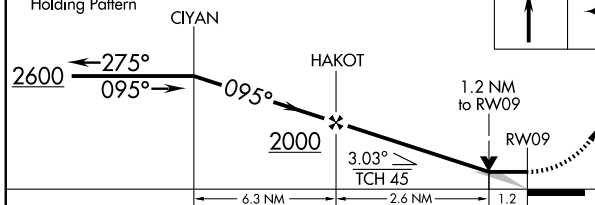
1742 A



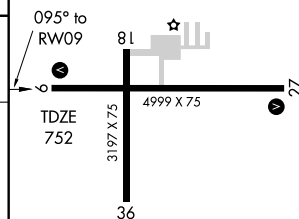
ELEV 754

4 NM
Holding Pattern

2600



CATEGORY	A	B	C	D
LNAY MDA	1160-1	408 (500-1)	1160-1¼	408 (500-1¼)
CIRCLING	1180-1 426 (500-1)	1220-1 466 (500-1)	1220-1½ 466 (500-1½)	1320-2 566 (600-2)



REIL Rwys 9 and 27 **L**
MIRL Rwys 9-27 and 18-36 **L**

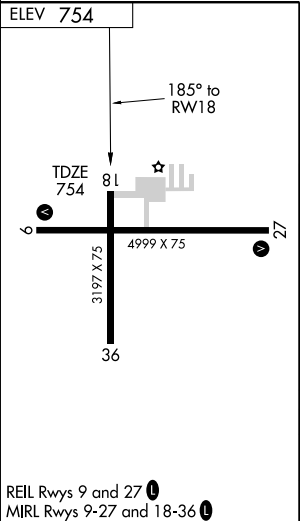
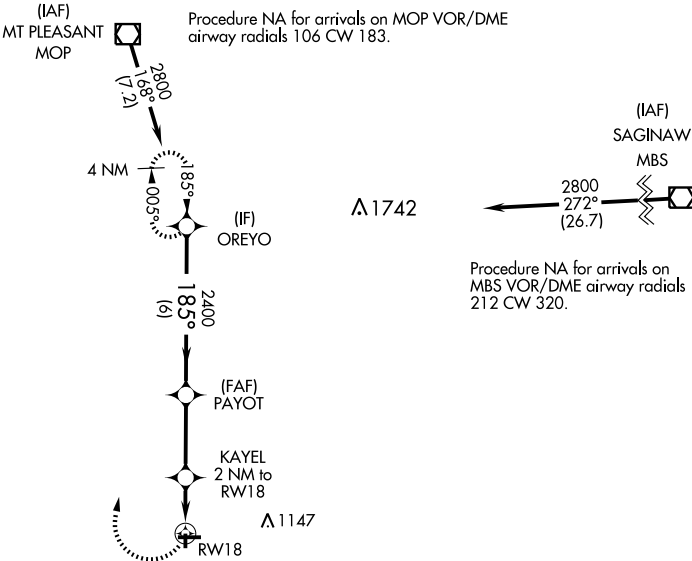
APP CRS	Rwy Idg	3197
185°	TDZE	754
	Apt Elev	754

RNAV (GPS) RWY 18

ALMA/ GRATIOT COMMUNITY (AMN)

NA	GPS or RNP-0.3 required. DME/DME RNP-0.3 NA. Straight-in minimums NA at night. Circling NA at night to Rwy 18 and 36.	MISSED APPROACH: Climbing right turn to 2800 direct OREYO WP and hold.
----	---	---

AWOS-3 124.175	SAGINAW APP CON ★ 126.45 235.625	CLNC DEL 119.25	UNICOM 122.8 (CTAF)
-------------------	-------------------------------------	--------------------	------------------------



2800	OREYO	KAYEL 2 NM to RW18	PAYOT	OREYO
		1.1 NM to RW18	2400	2800
		1.1	0.9	3 NM
				6 NM
CATEGORY	A	B	C	D
LNAV MDA	1160-1	406 (500-1)	1160-1¼ 406 (500-1¼)	NA
CIRCLING	1180-1 426 (500-1)	1220-1 466 (500-1)	1220-1½ 466 (500-1½)	NA

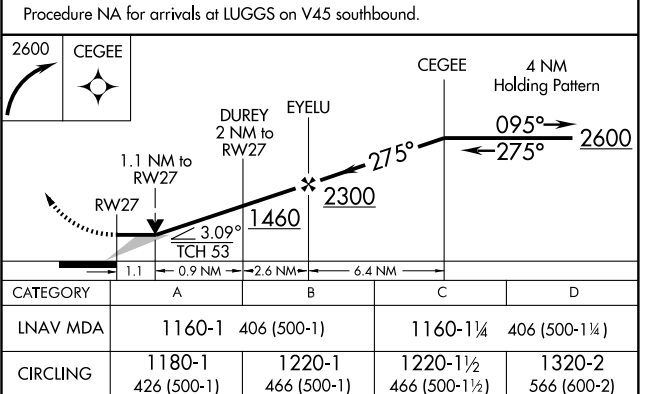
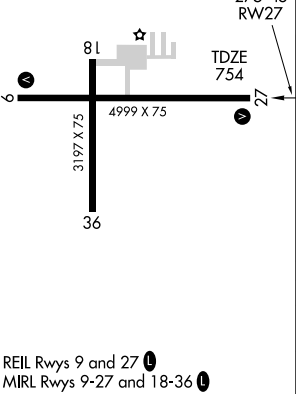
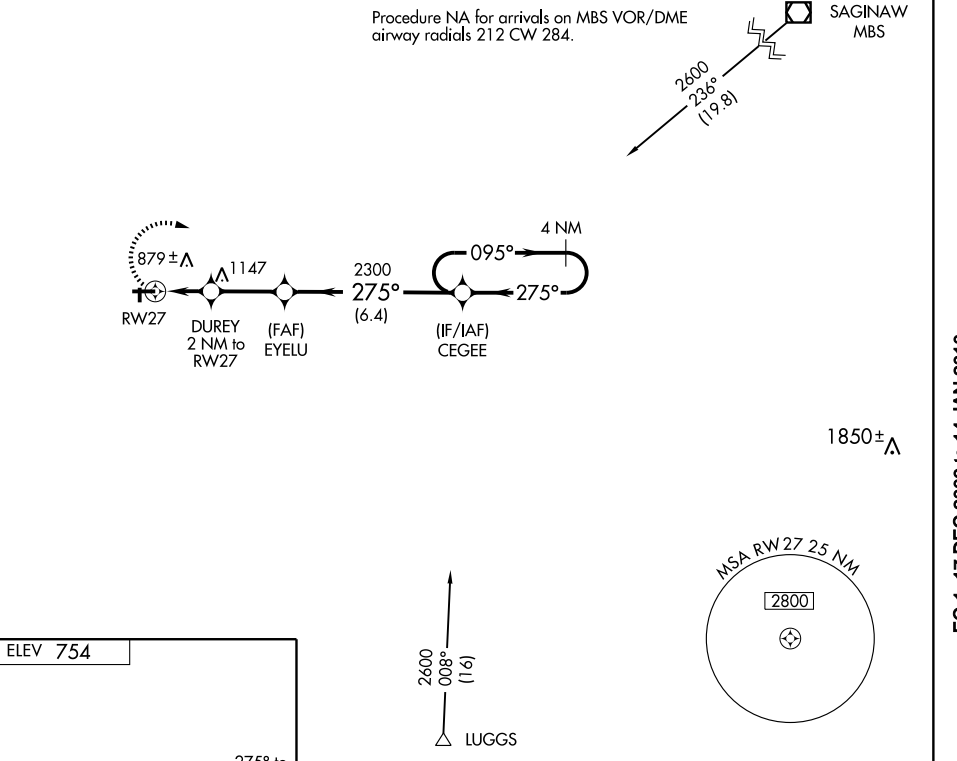
▼

▲ NA

GPS or RNP-0.3 required.
DME/DME RNP-0.3 NA.
Circling NA at night to Rwys 18 and 36.

MISSED APPROACH: Climbing right turn to 2600
direct CEGEE WP and hold.

AWOS-3 124.175	SAGINAW APP CON ★ 126.45 235.625	CLNC DEL 119.25	UNICOM 122.8 (CTAF) 0
-------------------	-------------------------------------	--------------------	--------------------------

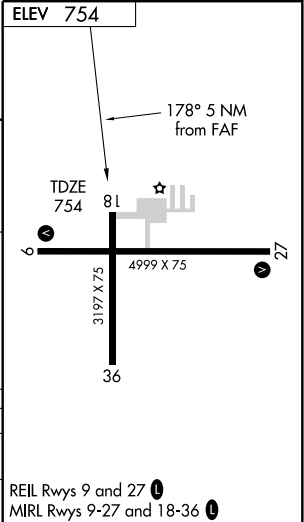
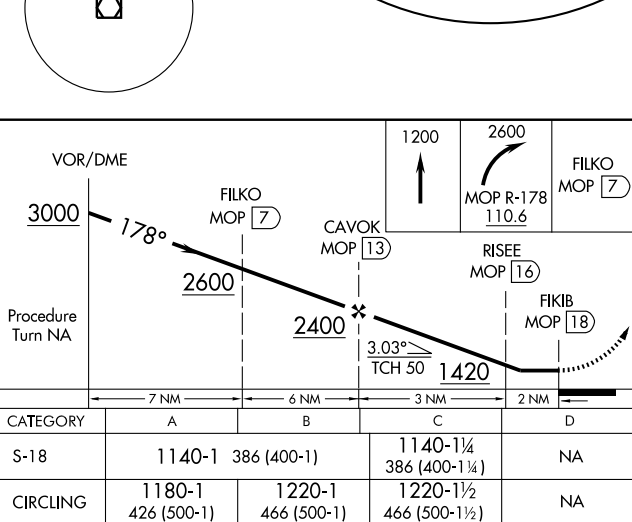
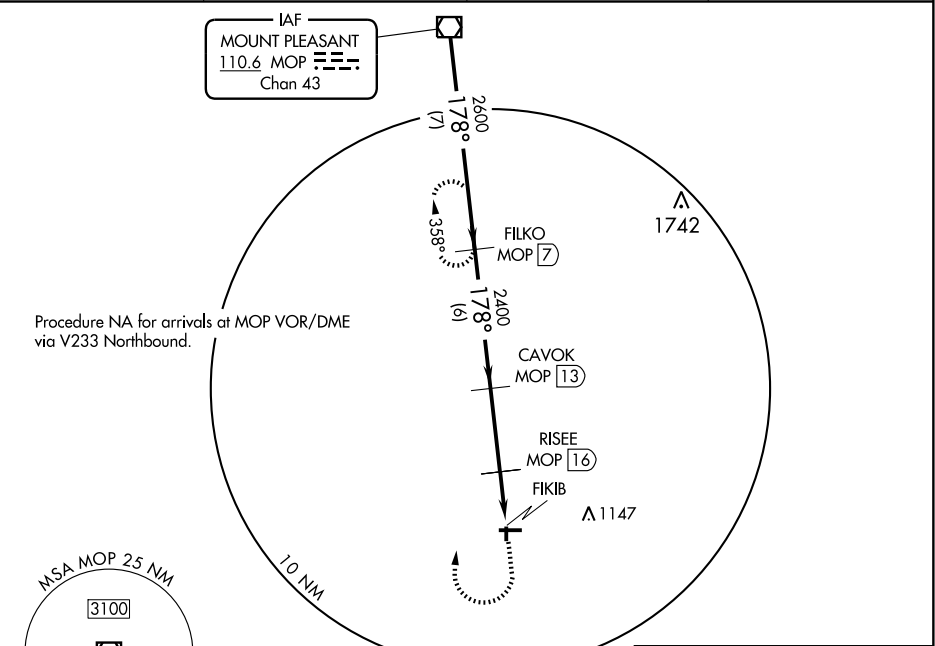


VOR/DME MOP 110.6 Chan 43	APP CRS 178°	Rwy Idg TDZE Apt Elev 754
---	------------------------	--

VOR/DME RWY 18

ALMA / GRATIOT COMMUNITY (AMN)

NA		MISSED APPROACH: Climb to 1200, then climbing right turn to 2600 via MOP R-178 to FILKO/7 DME and hold.	
AWOS-3 124.175	SAGINAW APP CON ★ 126.45 235.625	CLNC DEL 119.25	UNICOM 122.8 (CTAF)



LOC I-APN 109.7	APCH CRS 007°	Rwy Idg TDZE Arpt Elev	9001 685 689
---------------------------	-------------------------	------------------------------	---

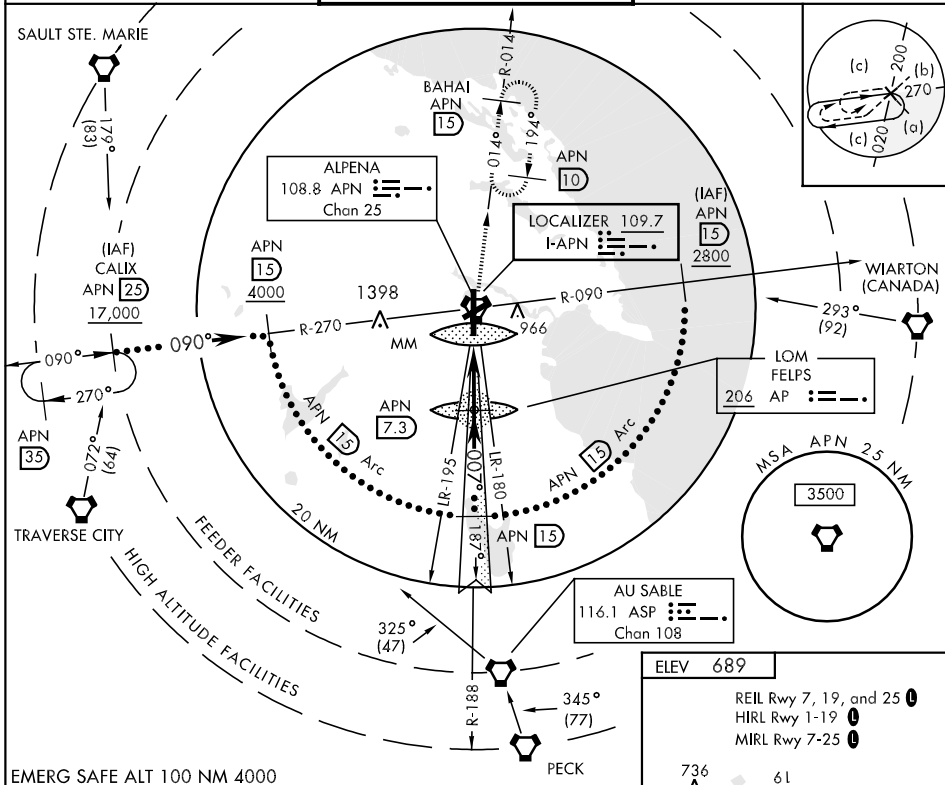
JAL-718 [USAF]

ALPENA COUNTY RGNL (KAPN)

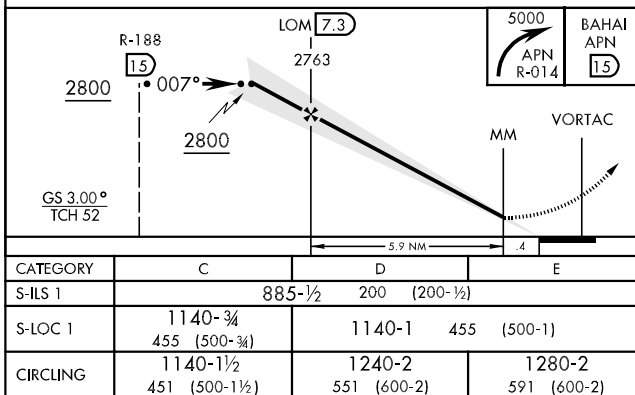
T

MISSED APPROACH: Climb to 5000 via R-014 to BAHAI 15 DME and hold.

ALPENA APP CON 128.425 379.3	ALPENA TOWER ★ 121.35 (CTAF) 0 318.1	GND CON 121.9 275.8
--	--	-------------------------------



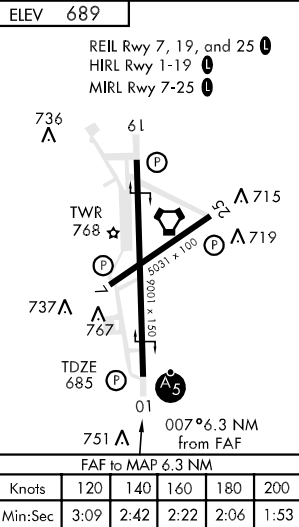
EMERG SAFE ALT 100 NM 4000



ALPENA, MICHIGAN

45°05'N-83°34'W

Amdt 4 09351



ALPENA COUNTY RGNL (KAPN)

HI-ILS/DME RWY 1

VORTAC APN 108.8 Chan 25	APCH CRS 175°	Rwy Idg TDZE Arpt Elev 9001 683 689
--	-------------------------	---

JAL-718 [USAF]

ALPENA COUNTY RGNL (KAPN)

MISSED APPROACH: Climb to 5000 via R-175 to LEGOR 15 DME and hold.

ALPENA APP CON
128.425 379.3ALPENA TOWER ★
121.35 (CTAF) 0 318.1GND CON
121.9 275.8

SAULT STE. MARIE

(179°
(83))(IAF)
CALIX
APN **25**
17,000APN **35**
072°
(64)

TRAVERSE CITY

FEEDER FACILITIES
HIGH ALTITUDE FACILITIES

EMERG SAFE ALT 100 NM 4000

R-355 **15**
2800

175°

5

2000

CATEGORY	C	D	E
S-19	1140-1½ 457 (500-1¼)	1140-1½ 457 (500-1½)	
CIRCLING	1140-1½ 451 (500-1½)	1240-2 551 (600-2)	1280-2 591 (600-2)

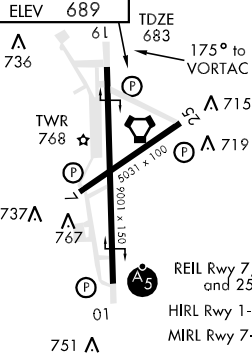
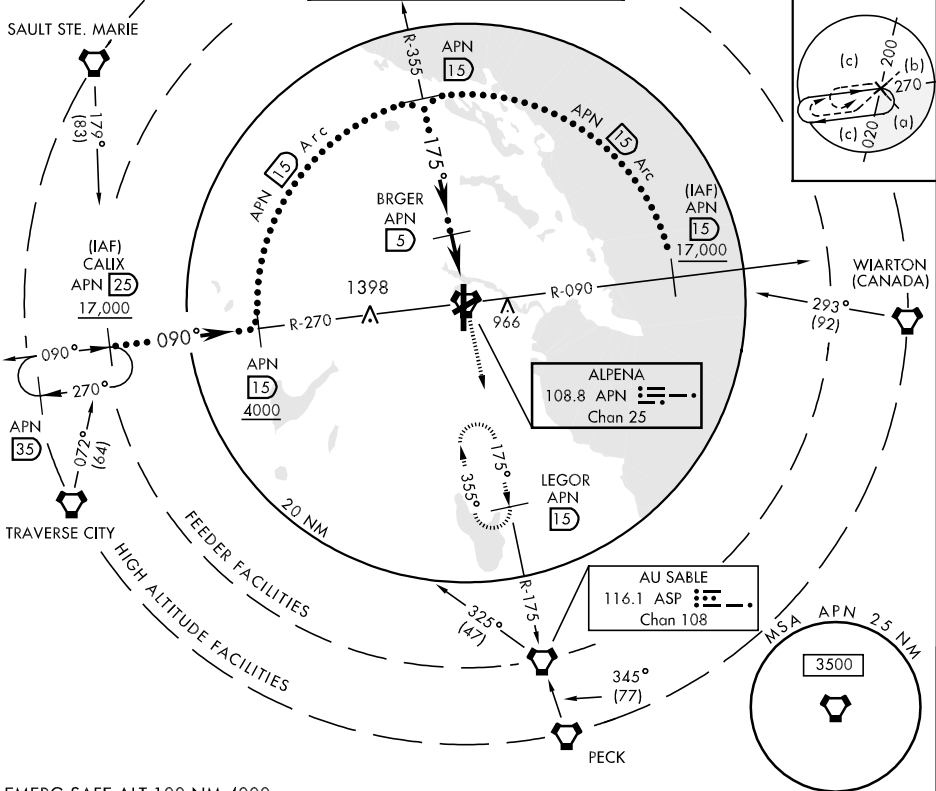
ALPENA, MICHIGAN

45° 05' N-83° 34' W

09351

ALPENA COUNTY RGNL (KAPN)

ALPENA COUNTY RGNL RWY 19



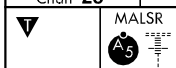
VORTAC APN
108.8
Chan **25**

APCH CRS
014°

Rwy Idg **9001**
TDZE **685**
Arpt Elev **689**

JAL-718 [USAF]

ALPENA COUNTY RGNL (KAPN)



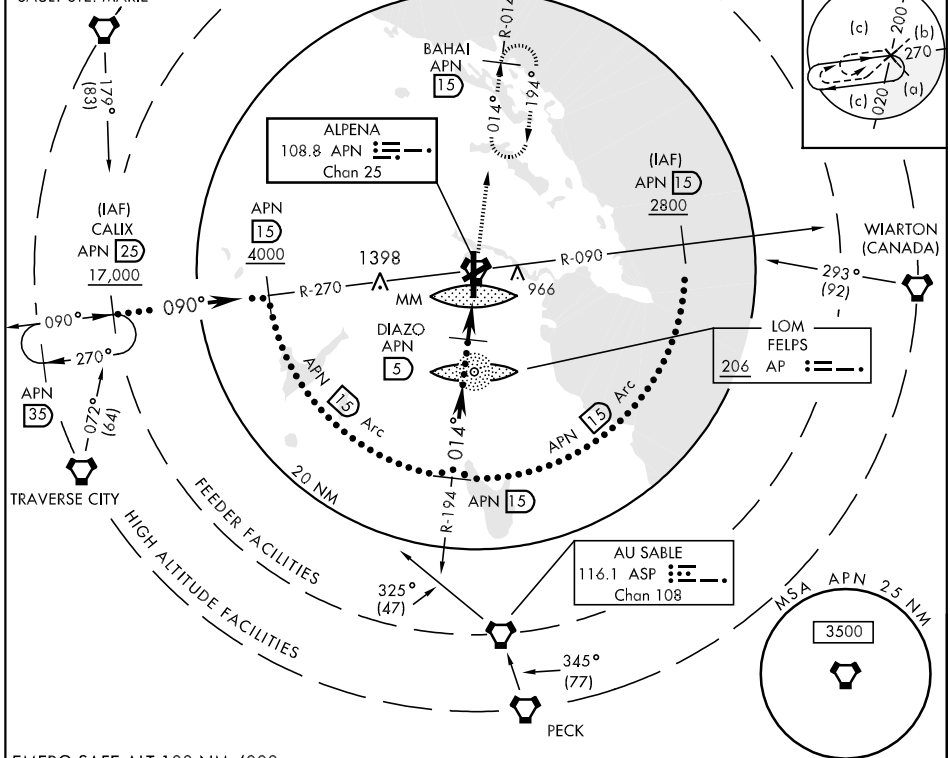
MISSED APPROACH: Climb to 5000 via R-014 to BAHAI 1.5 DME and hold.

ALPENA APP CON
128.425 379.3

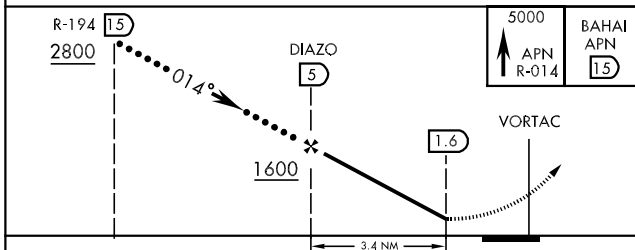
ALPENA TOWER ★
121.35 (CTAF) 0 318.1

GND CON
121.9 275.8

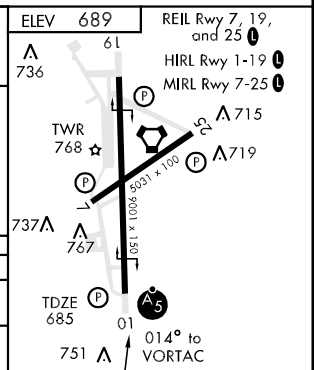
SAULT STE. MARIE



EMERG SAFE ALT 100 NM 4000



CATEGORY	C	D	E
S-1	1140- $\frac{3}{4}$ 455 (500- $\frac{3}{4}$)	1140-1 455 (500-1)	
CIRCLING	1140-1 $\frac{1}{2}$ 451 (500-1 $\frac{1}{2}$)	1240-2 551 (600-2)	1280-2 591 (600-2)



LOC I-APN <u>109.7</u>	APP CRS 007°	Rwy Idg TDZE Apt Elev	9001 685 689
----------------------------------	------------------------	-----------------------------	---

ILS RWY 1
ALPENA COUNTY RGNL (APN)

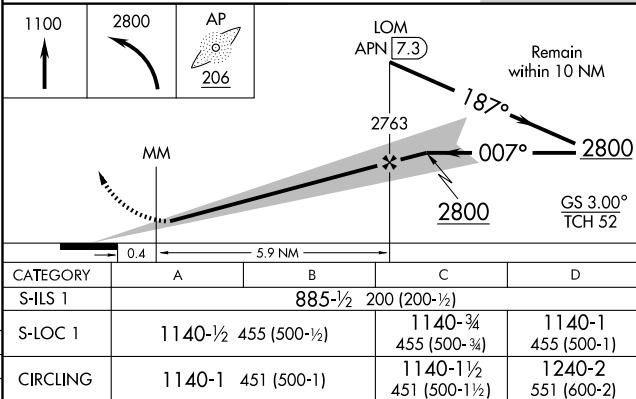
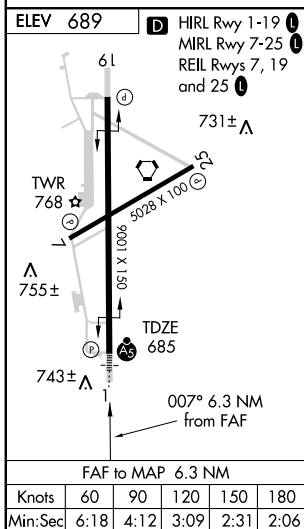
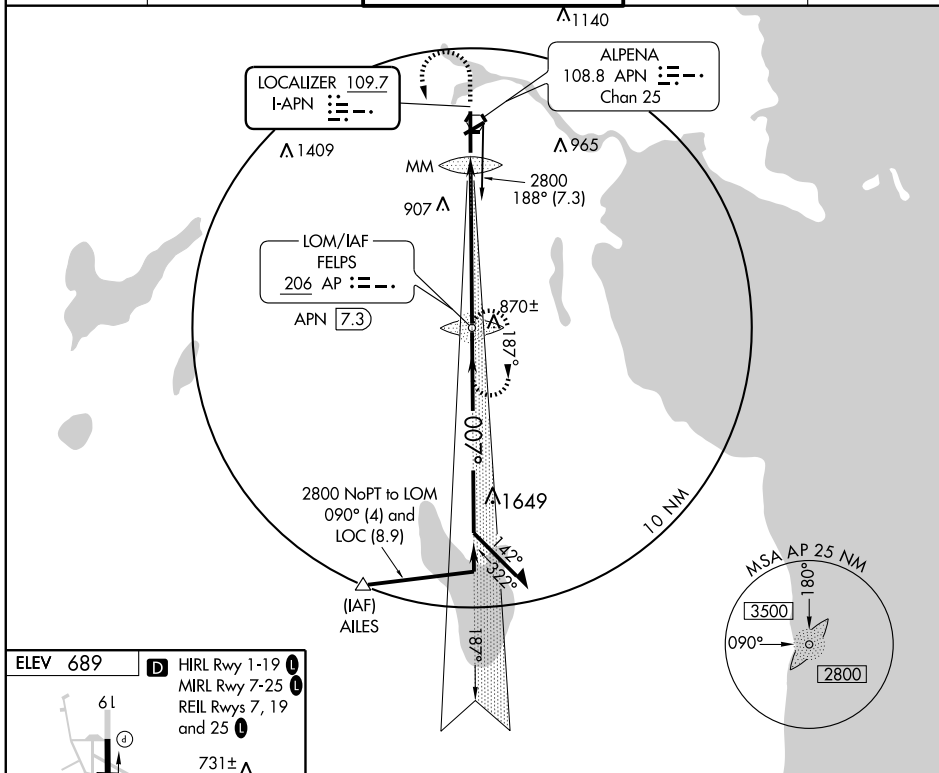


MALSR

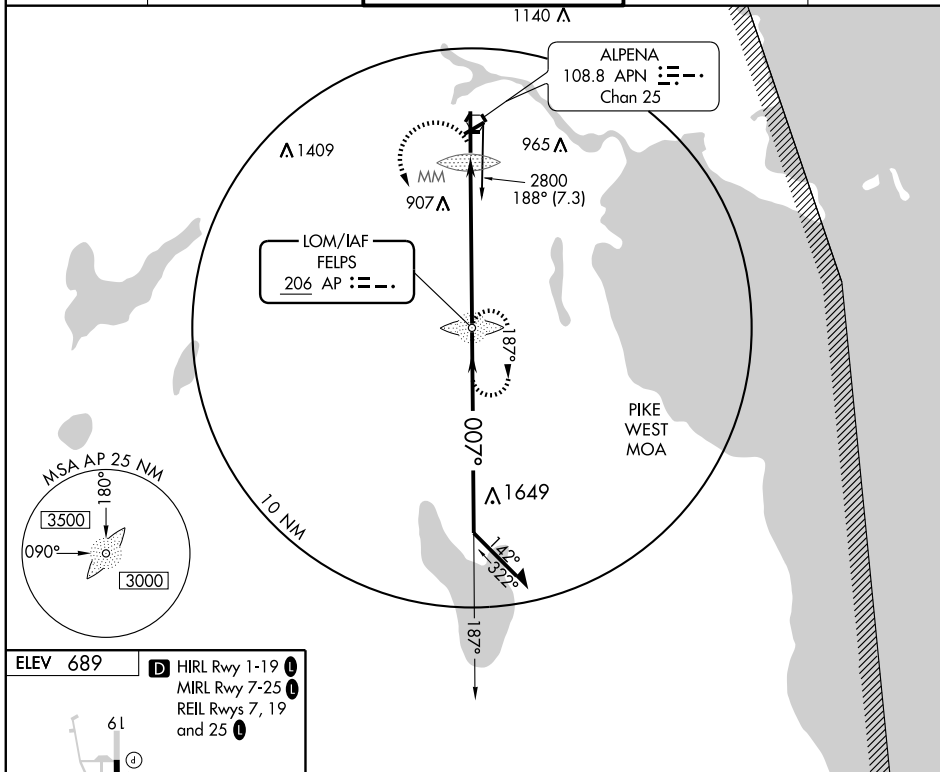


MISSED APPROACH: Climb to 1100 then climbing left turn to 2800 direct AP LOM and hold.

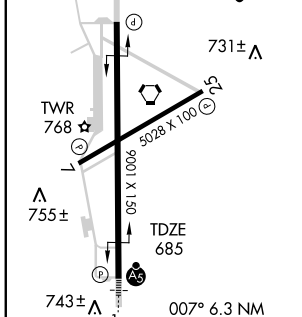
ASOS 120.675	ALPENA APP CON ★ 128.425 379.3	ALPENA TOWER ★ 121.35 (CTAF) 0 318.1	GND CON 121.9 275.8	UNICOM 122.95
------------------------	--	--	-------------------------------	-------------------------




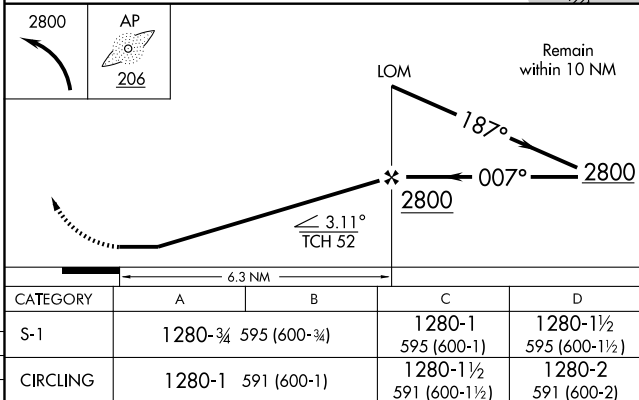
ASOS 120.675	ALPENA APP CON ★ 128.425 379.3	ALPENA TOWER ★ 121.35 (CTAF) 0 318.1	GND CON 121.9 275.8	UNICOM 122.95
------------------------	--	--	-------------------------------	-------------------------



ELEV 689	D HIRL Rwy 1-19 L MIRL Rwy 7-25 L REIL Rwy 7, 19 and 25 L
----------	--



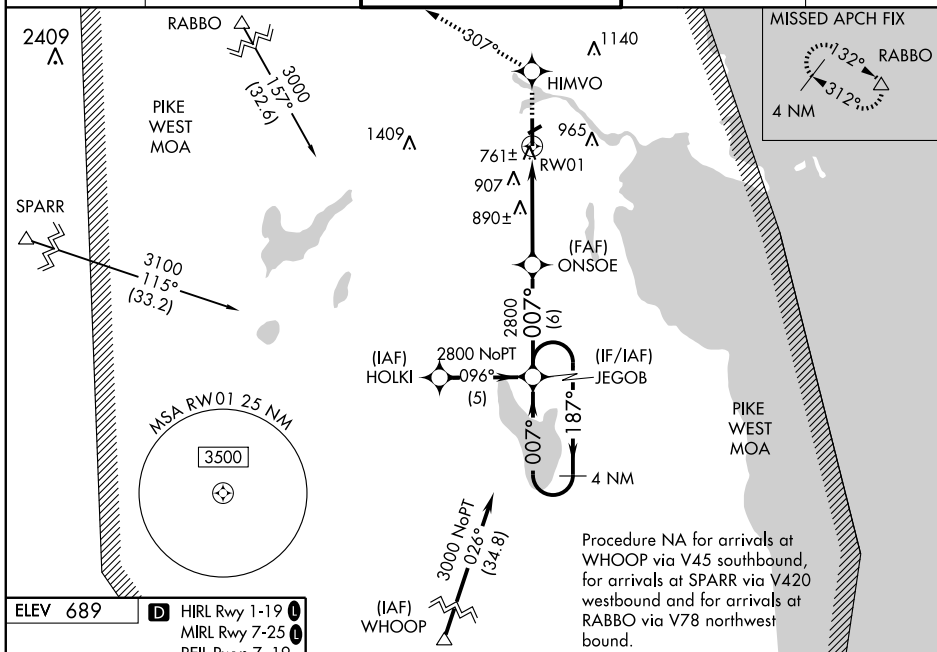
					
Knots	60	90	120	150	180
Min:Sec	6:18	4:12	3:09	2:31	2:06



MALS

MISSED APPROACH: Climb to 3500
direct HIMVO and via 307° track to
RABBO and hold.

V For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 48°C (118°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Roger City altimeter setting and increase all DA 55 feet and all MDA 60 feet and increase LNAV/VNAV all Cats and LNAV Cats C and D visibility ¼ mile. Baro-VNAV and VDP NA when using Roger City altimeter setting.

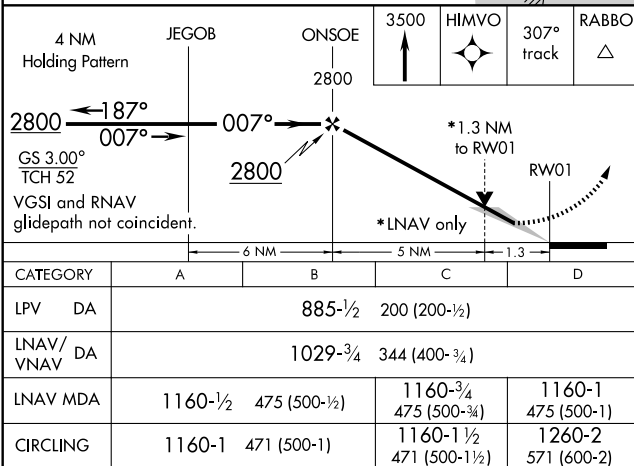
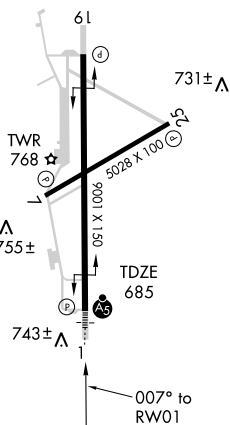
UNICOM
122.95

Procedure NA for arrivals at WHOOP via V45 southbound, for arrivals at SPARR via V420 westbound and for arrivals at RABBO via V78 northwest bound.

EC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 689

D HIRL Rwy 1-19
MIRL Rwy 7-25
REIL Rwys 7, 19
and 25 **L**



VORTAC APN 108.8 Chgn 25	APP CRS 177°	Rwy Idg 9001 TDZE 683 Apt Elev 689
--	------------------------	---

VOR or GPS RWY 19
ALPENA COUNTY RGNL (APN)

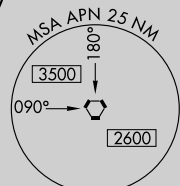
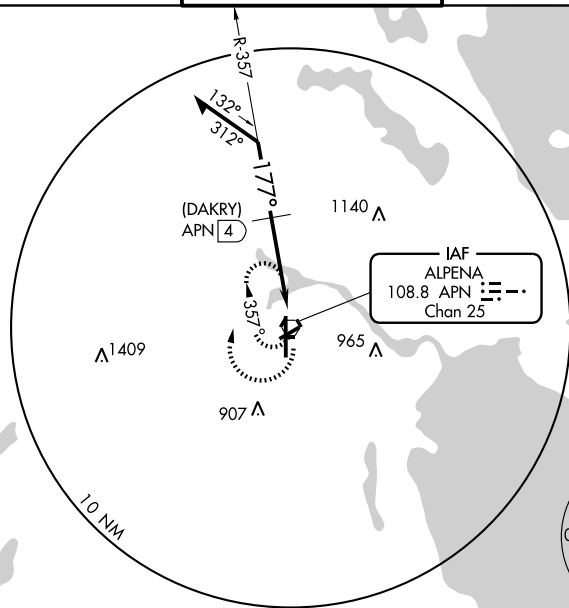
MISSED APPROACH: Climbing right turn to 2400 in APN VORTAC holding pattern.

ASOS
120.675

ALPENA APP CON ★
128.425 379.3

ALPENA TOWER ★
121.35 (CTAF) **L** 318.1

GND CON
121.9 275.8

UNICOM
122.95

1649

Remain
within 10 NM

VORTAC

2400

APN 4

1220

A schematic diagram showing a cross-section of a polymer membrane with a central channel. The channel is labeled with a double-headed arrow and the text "4 nm". The channel is wider in the center and tapers towards the edges, where it meets the polymer walls. The polymer walls are represented by a textured, shaded region.

2400

APN

ELEV 689

D

APN VORTAC

883 731±Λ

TWR
748

1

 Δ

X 15

743

HIRL Rwy 1-19 **L**

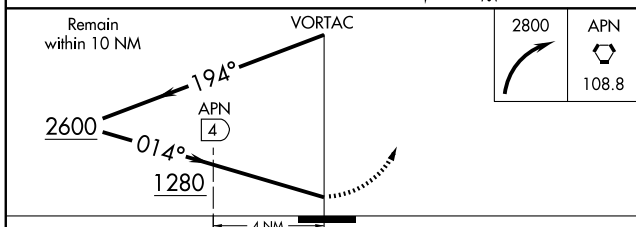
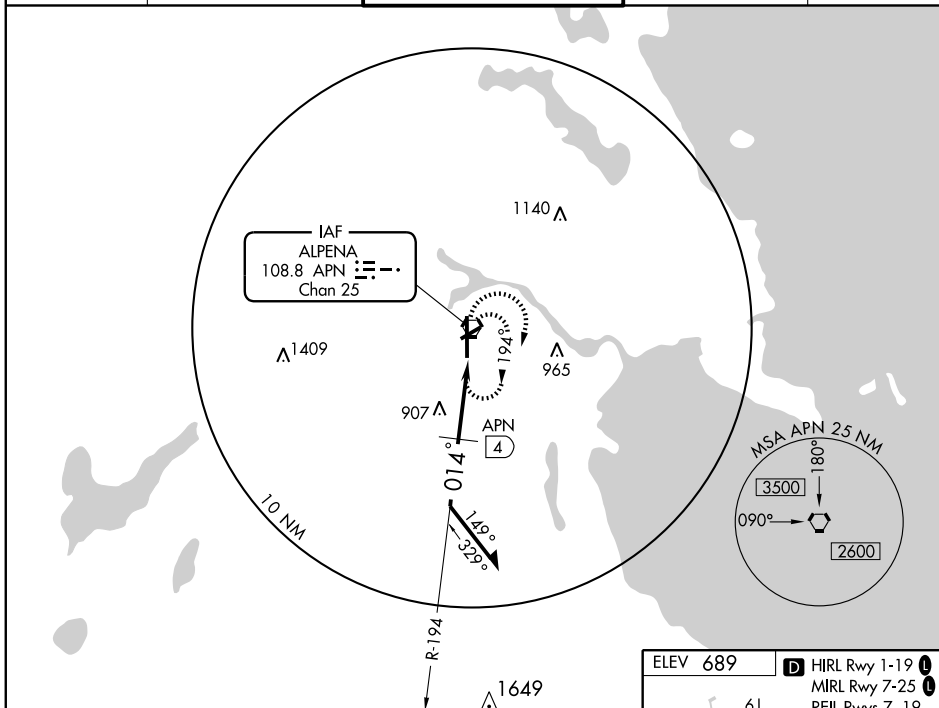
MIRL Rwy 7-25 **L**
Rwy 7, 19 and 25 **L**

REIL Rwy 7, 19 and 25

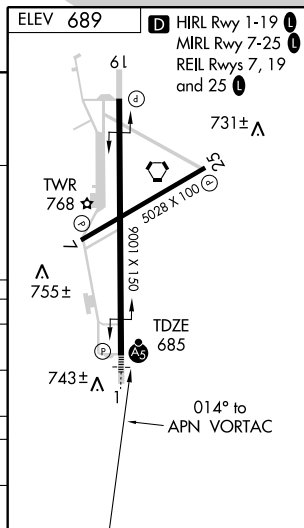
VORTAC APN 108.8 Chan 25	APP CRS 014°	Rwy Idg TDZE Apt Elev	9001 685 689
--	------------------------	-----------------------------	---

VOR RWY 1
ALPENA COUNTY RGNL (APN)

		MALSR 	MISSED APPROACH: Climbing right turn to 2800 in APN VORTAC holding pattern.	
ASOS 120.675	ALPENA APP CON ★ 128.425 379.3	ALPENA TOWER ★ 121.35 (CTAF) 0 318.1	GND CON 121.9 275.8	UNICOM 122.95

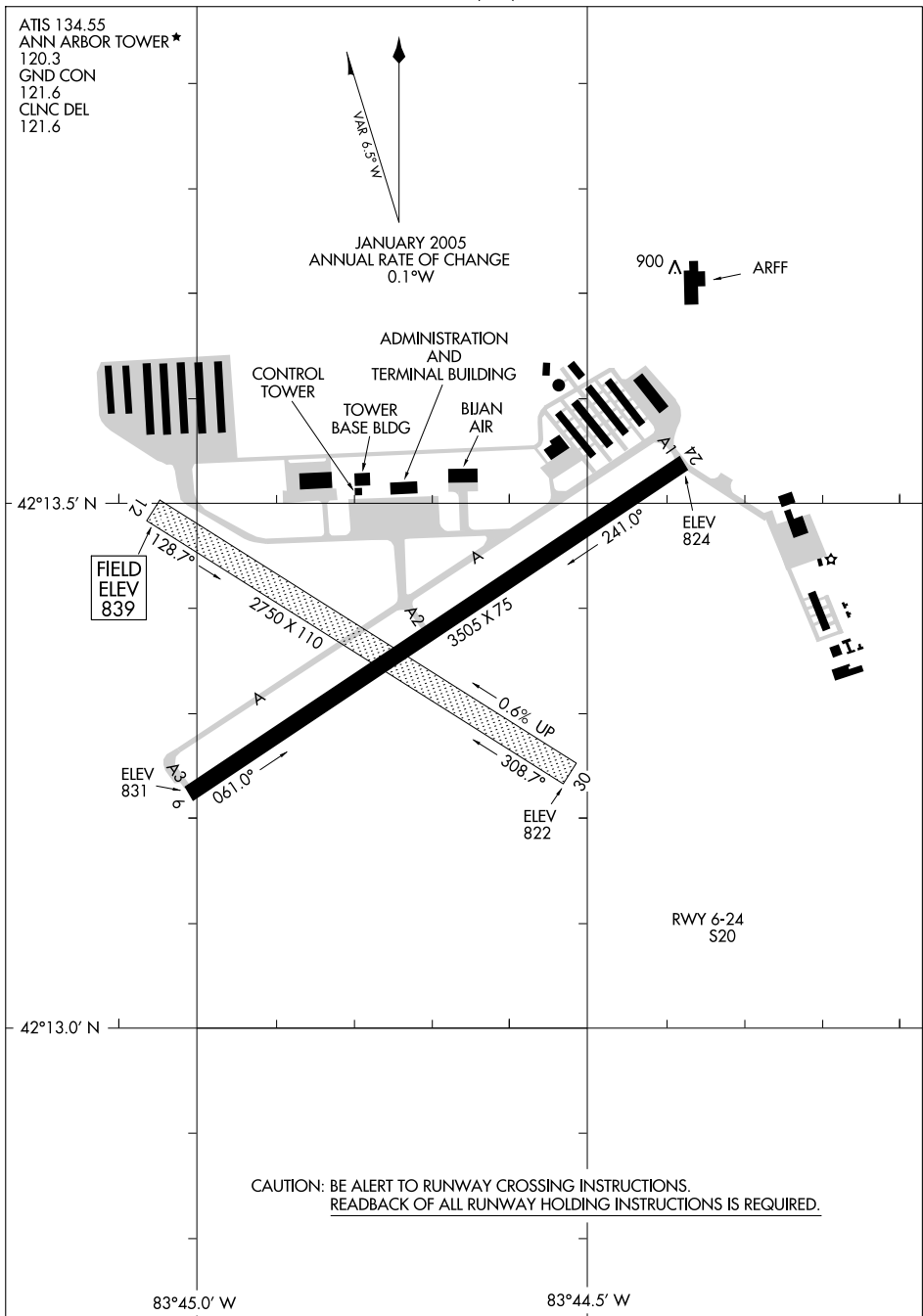


CATEGORY	A	B	C	D
S-1	1280-½ 595 (600-½)		1280-1 595 (600-1)	1280-1¼ 595 (600-1¼)
CIRCLING	1280-1 591 (600-1)		1280-1½ 591 (600-1½)	1280-2 591 (600-2)
DME MINIMUMS				
S-1	1140-½ 455 (500-½)		1140-¾ 455 (500-¾)	1140-1 455 (500-1)
CIRCLING	1140-1 451 (500-1)		1140-1½ 451 (500-1½)	1240-2 551 (600-2)



AIRPORT DIAGRAM

AL-5506 (FAA)

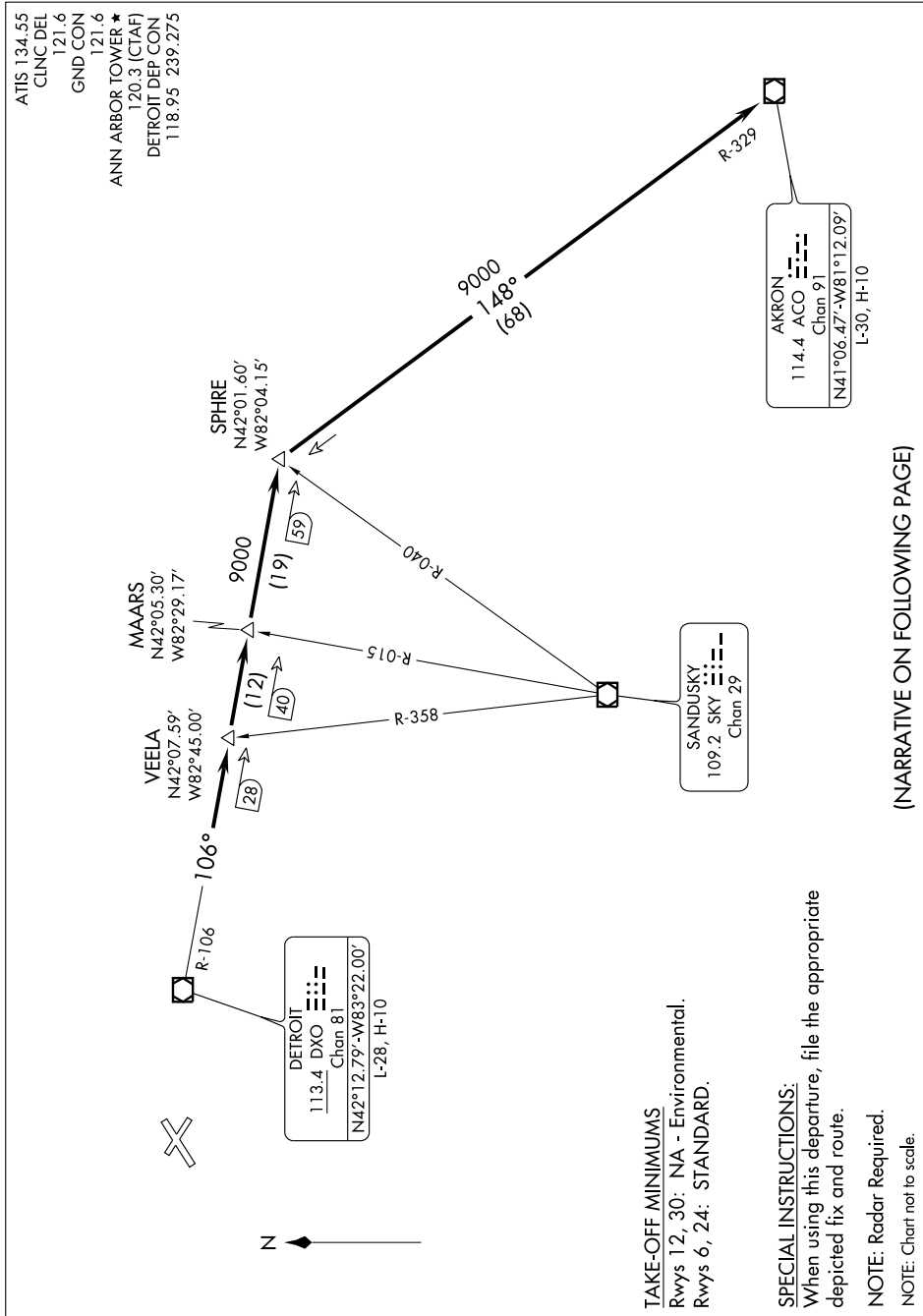
 ANN ARBOR MUNI (ARB)
 ANN ARBOR, MICHIGAN


AKRON TWO DEPARTURE

SL-5506 (FAA)

ANN ARBOR MUNI (ARB)

ANN ARBOR, MICHIGAN





DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 6/24: Climb via assigned heading for radar vectors, thence. . . .

. . . .to intercept DXO VOR/DME R-106 to SPHRE INT, then via ACO R-329 to ACO VOR/DME. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES

Rwy 6: Multiple Trees beginning 442' from DER, 47' right of centerline, up to 79' AGL/899' MSL.

Building 312' from DER, 479' right of centerline, 15' AGL/838' MSL.

Multiple Trees beginning 635' from DER, 182' left of centerline, up to 59' AGL/887' MSL.

Building 99' from DER, 351' left of centerline, 22' AGL/849' MSL.

Rwy 24: Multiple Trees beginning 479' from DER, 473' left of centerline, up to 100' AGL/929' MSL.

Multiple Trees beginning 462' from DER, 486' right of centerline, up to 50' AGL/885' MSL.

Terrain 138' from DER, 475' right of centerline, 0' AGL/837' MSL.

DETROIT, MICHIGAN



ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUXX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUXX INT. Thence

FORT WAYNE TRANSITION (FWA.CRUXX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUXX INT. Thence

LITCHFIELD TRANSITION (LFD.CRUXX4): From over LFD VORTAC via LFD R-106 to CRUXX INT. Thence

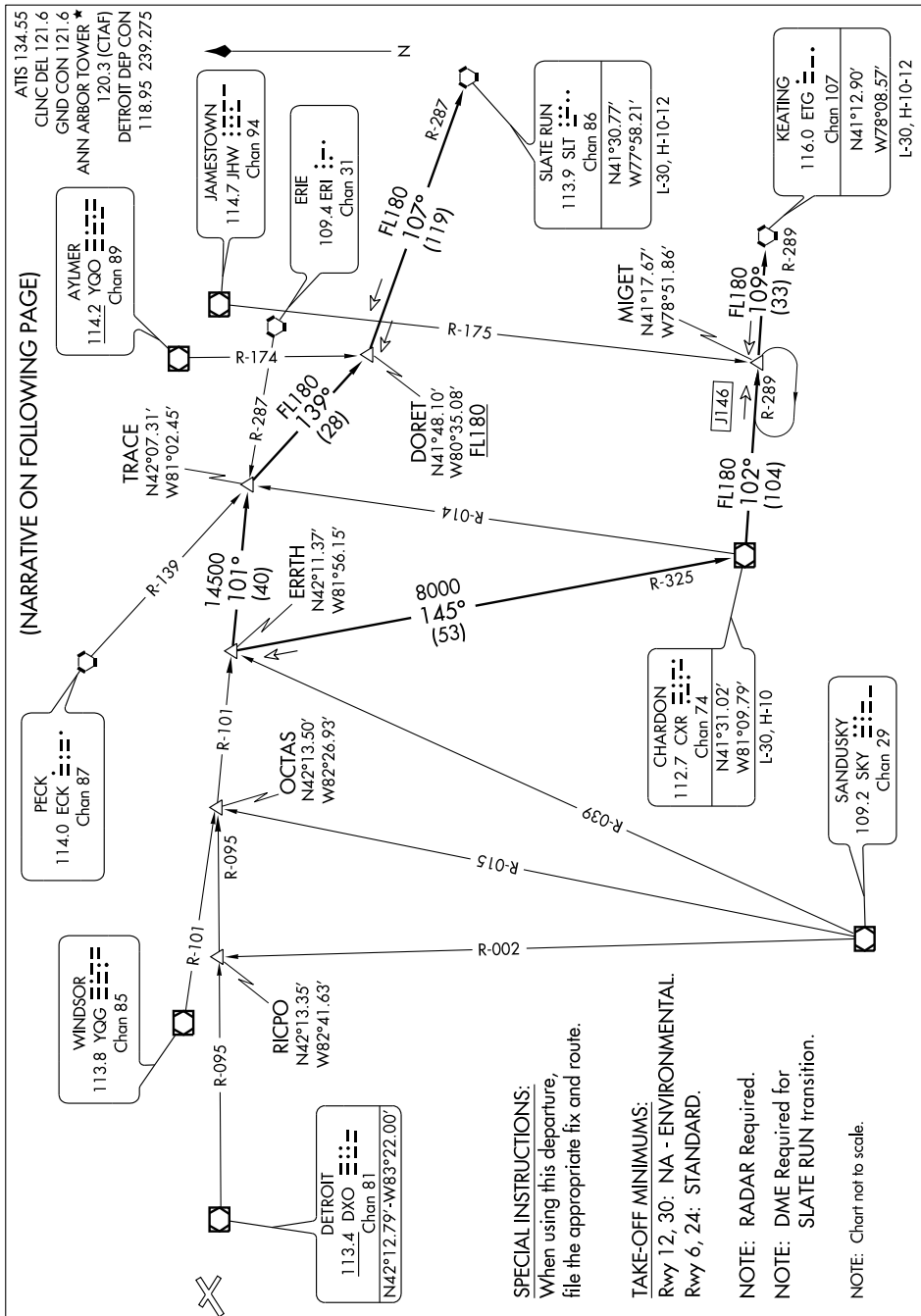
. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUXX INT via 025° heading.

. . . . Aircraft landing YIP or ARB: From over CRUXX INT via 050° heading.
Expect radar vector to final approach course.

ERRTH TWO DEPARTURE

SL-5506 (FAA)

ANN ARBOR, MICHIGAN



ERRTH TWO DEPARTURE

SL-5506 (FAA)

ANN ARBOR, MICHIGAN



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 6 and 24: Climb via assigned heading for vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

CHARDON TRANSITION (ERRTH2.CXR): From over ERRTH INT via CXR R-325 to CXR VOR/DME.

KEATING TRANSITION (ERRTH2.ETG): From over ERRTH INT via CXR R-325 to CXR VOR/DME, then via CXR R-102 and ETG R-289 to MIGET INT, then via ETG R-289 MIGET INT to ETG VORTAC.

SLATE RUN TRANSITION (ERRTH2.SLT): (DME Required) From over ERRTH INT via YQG R-101 to TRACE INT, then via ECK R-139 to DORET INT, then via SLT R-287 to SLT VORTAC.

TAKE-OFF OBSTACLES:

- Rwy 6: Multiple trees beginning 442' from DER, 47' right of centerline, up to 79' AGL/899' MSL. Building 312' from DER, 479' right of centerline, 15' AGL/838' MSL. Multiple trees beginning 635' from DER, 182' left of centerline, up to 59' AGL/887' MSL. Building 99' from DER, 351' left of centerline, 22' AGL/849' MSL.
- Rwy 24: Multiple trees beginning 479' from DER, 473' left of centerline, up to 100' AGL/929' MSL. Multiple trees beginning 462' from DER, 486' right of centerline, up to 50' AGL/885' MSL. Terrain 138' from DER, 475' right of centerline, 0' AGL/837' MSL.

FORT WAYNE THREE DEPARTURE

SL-5506 (FAA)

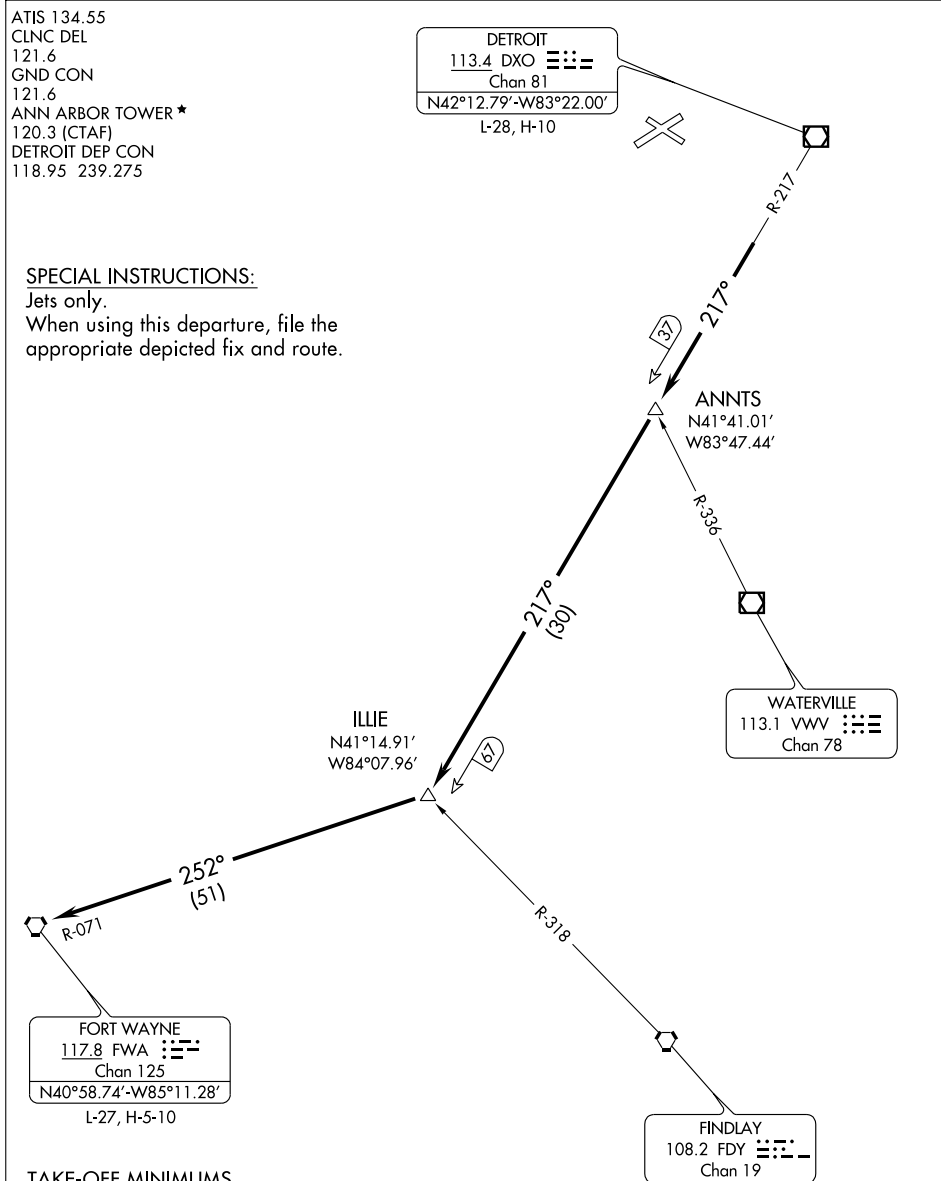
ANN ARBOR, MICHIGAN

ATIS 134.55
 CLNC DEL
 121.6
 GND CON
 121.6
 ANN ARBOR TOWER ★
 120.3 (CTAF)
 DETROIT DEP CON
 118.95 239.275

SPECIAL INSTRUCTIONS:

Jets only.

When using this departure, file the
 appropriate depicted fix and route.

TAKE-OFF MINIMUMS

Rwys 6, 24: STANDARD.

Rwys 12, 30: NA - Environmental.

NOTE: RADAR Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)



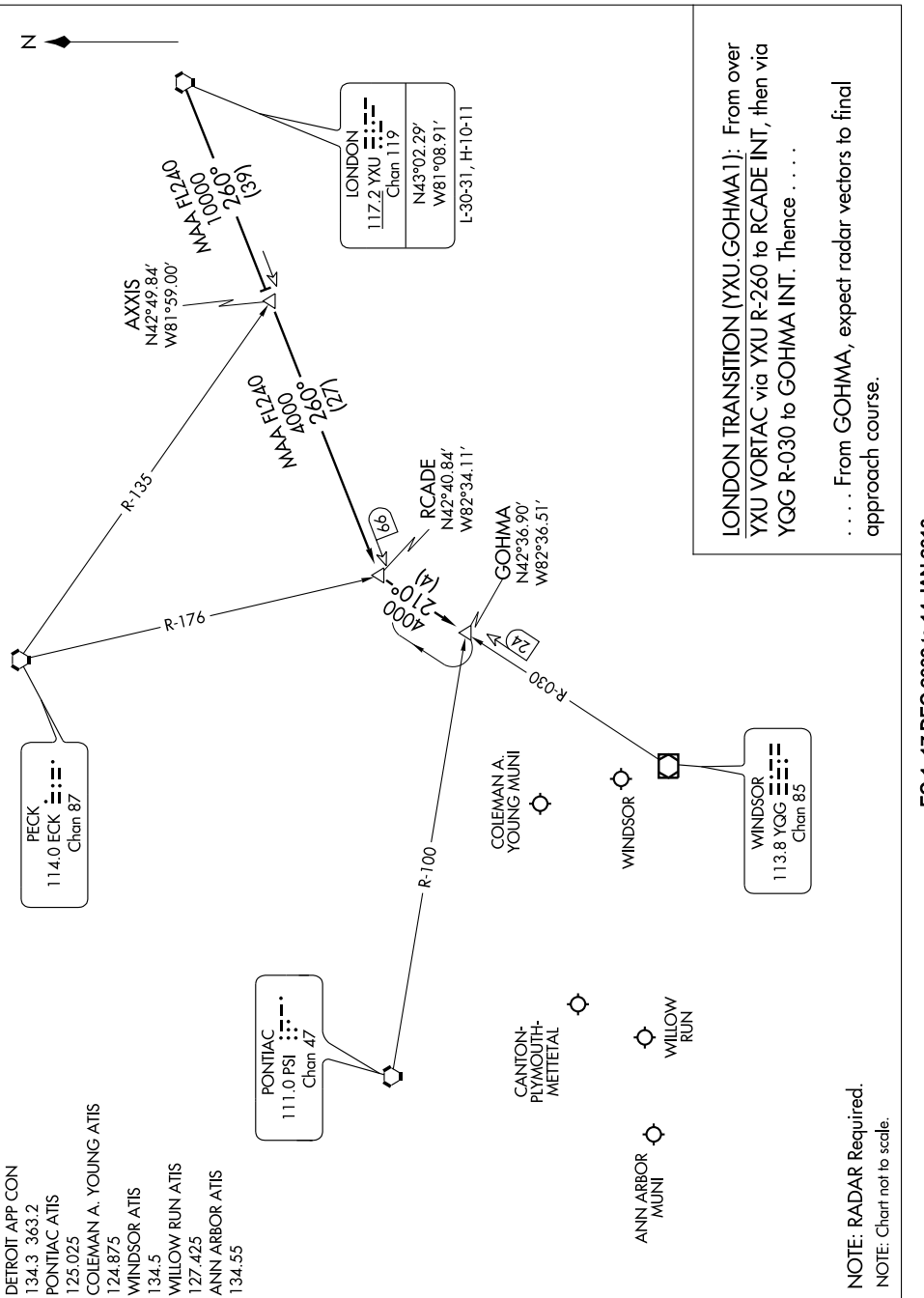
DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 6/24: Climb via assigned heading for radar vectors, thence. . . .

. . . .to intercept DXO VOR/DME R-217 to ILLIE INT, then via FWA R-071 to FWA VORTAC. Maintain 3000, expect clearance to filed flight level ten (10) minutes after departure.

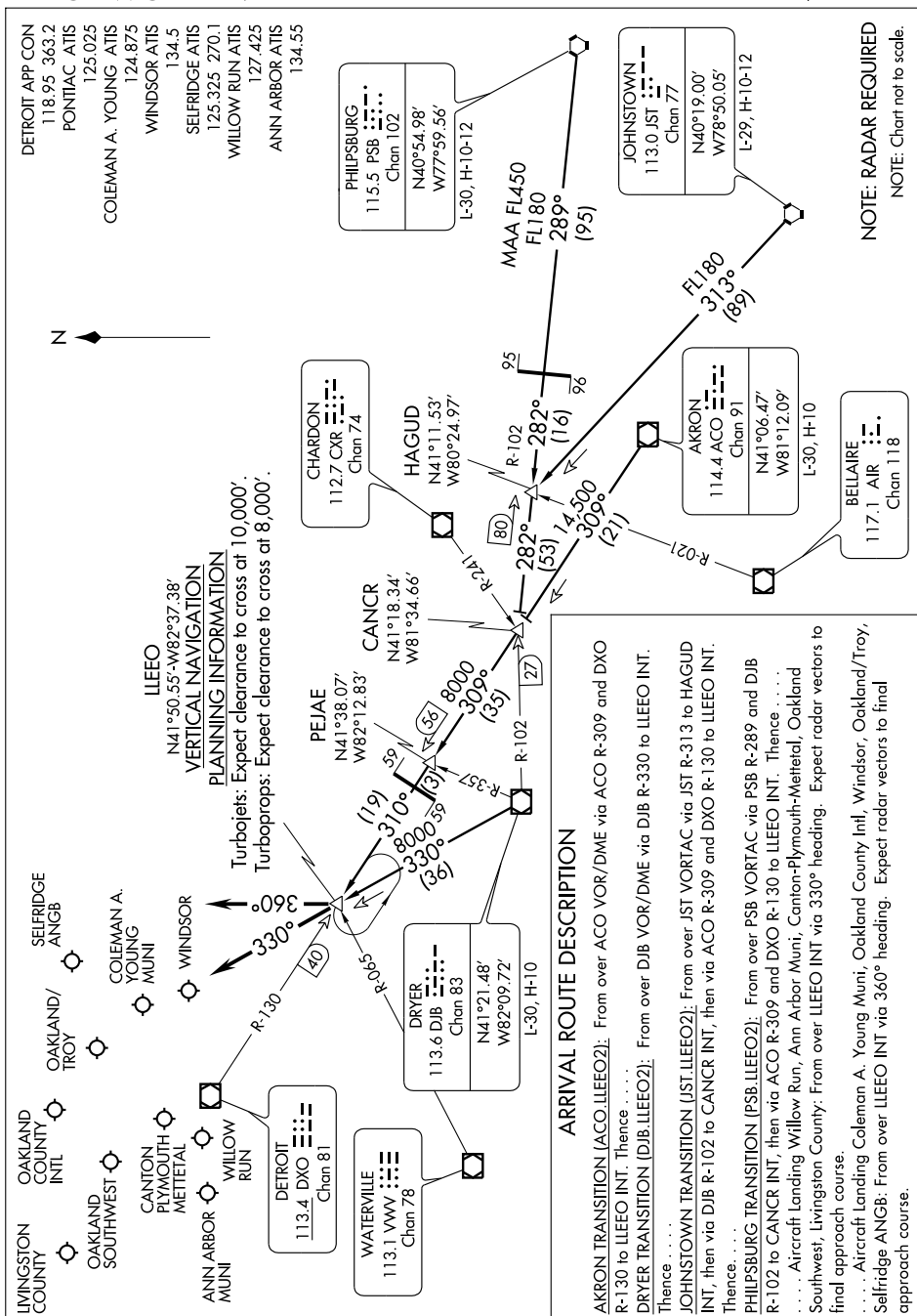
TAKE-OFF OBSTACLES:

- Rwy 6: Multiple trees beginning 442' from DER, 47' right of centerline, up to 79' AGL/899' MSL.
 Building 312' from DER, 479' right of centerline, 15' AGL/838 MSL.
 Multiple trees beginning 635' from DER, 182' left of centerline, up to 59' AGL/887' MSL.
 Building 99' from DER, 351' left of centerline, 22' AGL/849' MSL.
- Rwy 24: Multiple trees beginning 479' from DER, 473' left of centerline, up to 100' AGL/929' MSL.
 Multiple trees beginning 462' from DER, 486' right of centerline, up to 50' AGL/885' MSL.
 Terrain 138' from DER, 475' right of centerline, 0' AGL/837' MSL.



LEEO TWO ARRIVAL

DETROIT, MICHIGAN



NOTE: Chart not to scale.

SPECIAL INSTRUCTIONS:

When using this departure, file the appropriate depicted fix and route.

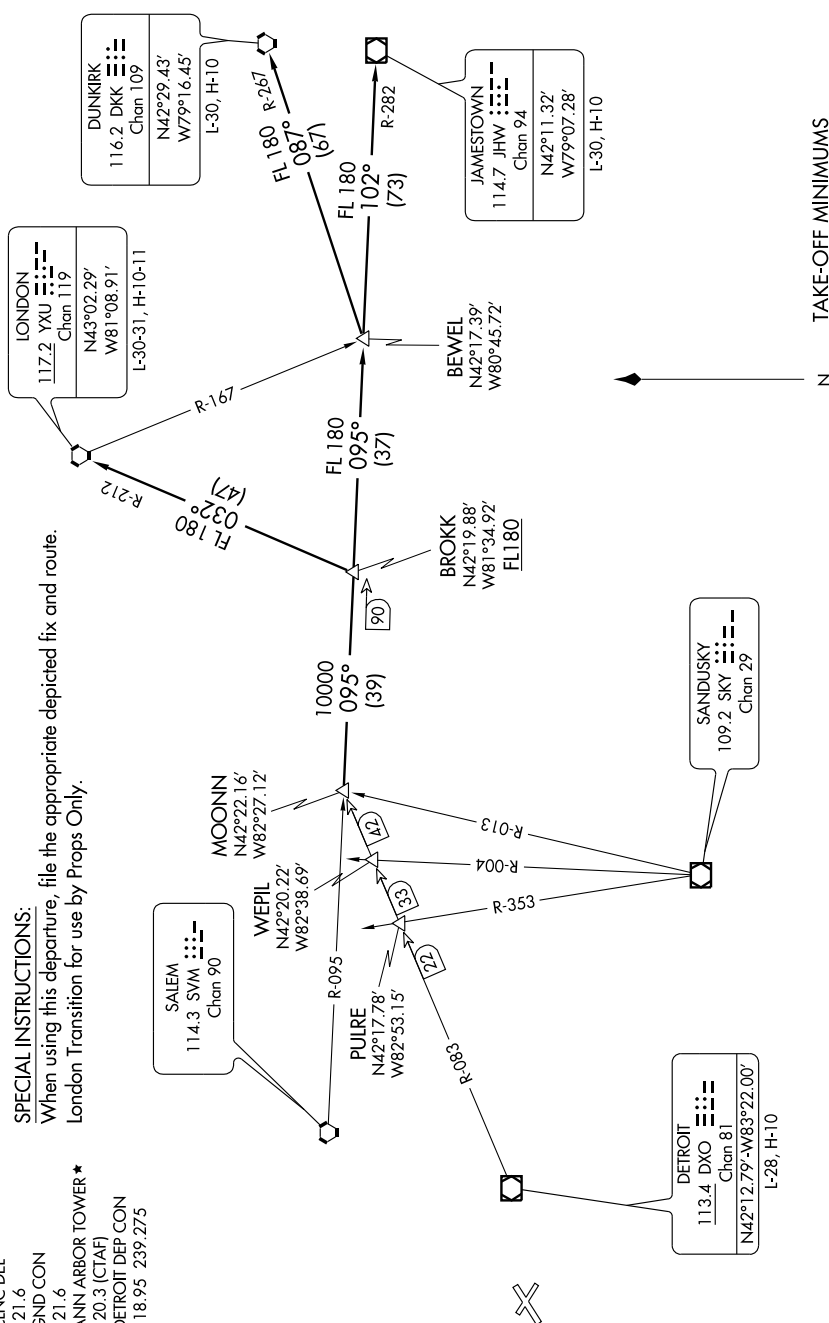
London Transition for use by Props Only.

ANN ARBOR TOWER ★

120.3 (CTAF)

DETROIT DEP CON

118.95 239.275



TAKE-OFF MINIMUMS

Rwys 12, 30: NA - Environmental.

RWYS 6, 24: STANDARD.

NOTE: RADAR Required.

(NARRATIVE ON FOLLOWING PAGE)

EC-1. 17 DEC 2009 to 14 JAN 2010



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 6/24: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

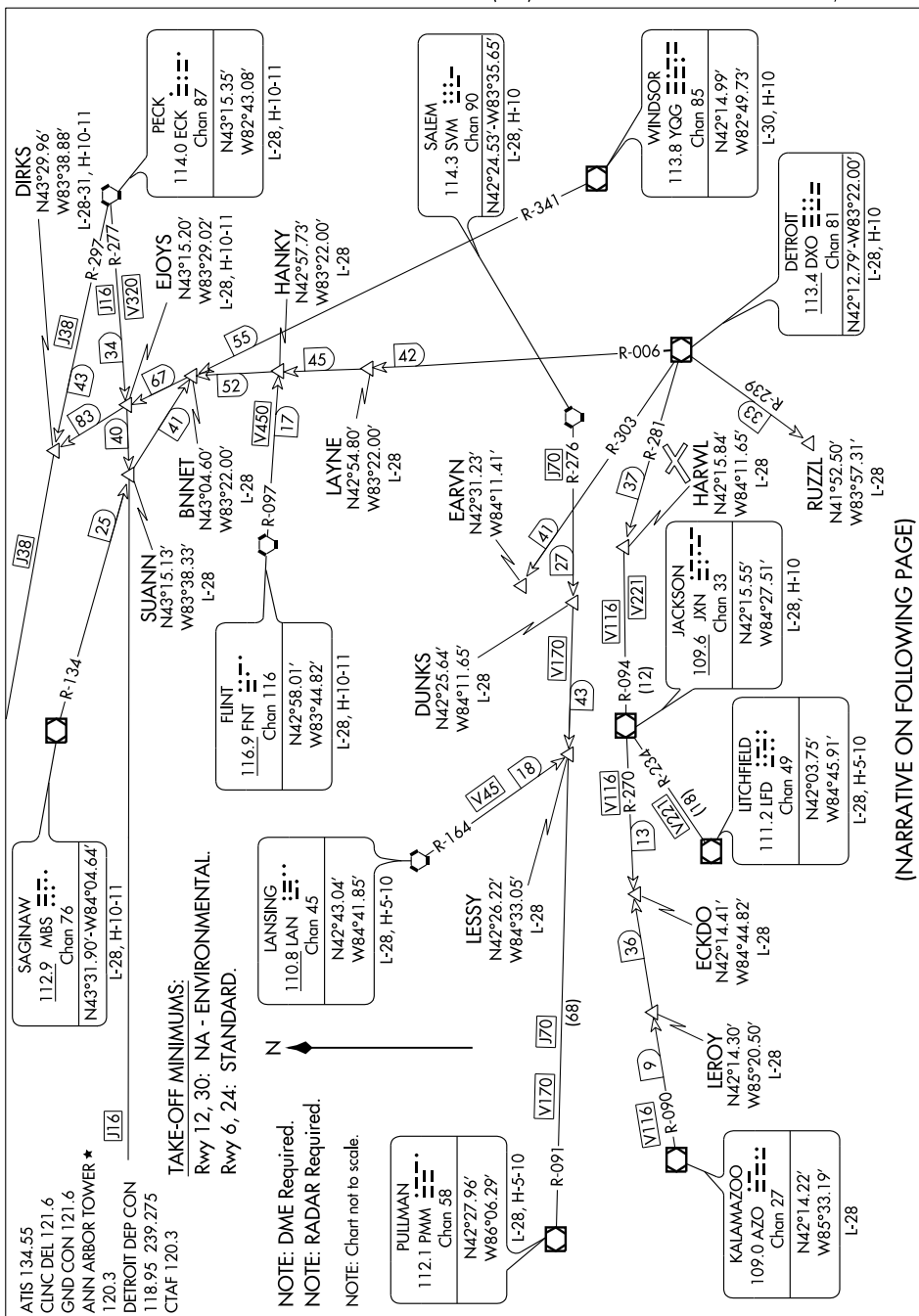
DUNKIRK TRANSITION (MOONN2.DKK): From over MOONN INT via SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to BEWEL INT, then via DKK R-267 to DKK VORTAC.

JAMESTOWN TRANSITION (MOONN2.JHW): From over MOONN INT via SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to BEWEL INT, then via JHW R-282 to JHW VOR/DME.

LONDON TRANSITION (MOONN2.YXU): From over MOONN INT via SVM R-095 to BROKK INT, then via YXU R-212 to YXU VORTAC.

TAKE-OFF OBSTACLES

- Rwy 6: Multiple trees beginning 442' from DER, 47' right of centerline, up to 79' AGL/899' MSL. Building 312' from DER, 479' right of centerline, 15' AGL/838' MSL. Multiple trees beginning 635' from DER, 182' left of centerline, up to 59' AGL/887' MSL. Building 99' from DER, 351' left of centerline, 22' AGL/849' MSL.
- Rwy 24: Multiple trees beginning 479' from DER, 473' left of centerline, up to 100' AGL/929' MSL. Multiple trees beginning 462' from DER, 486' right of centerline, up to 50' AGL/885' MSL. Terrain 138' from DER, 475' right of centerline, 0' AGL/837' MSL.



(NARRATIVE ON FOLLOWING PAGE)

EC-1. 17 DEC 2009 to 14 JAN 2010



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 6 AND 24: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

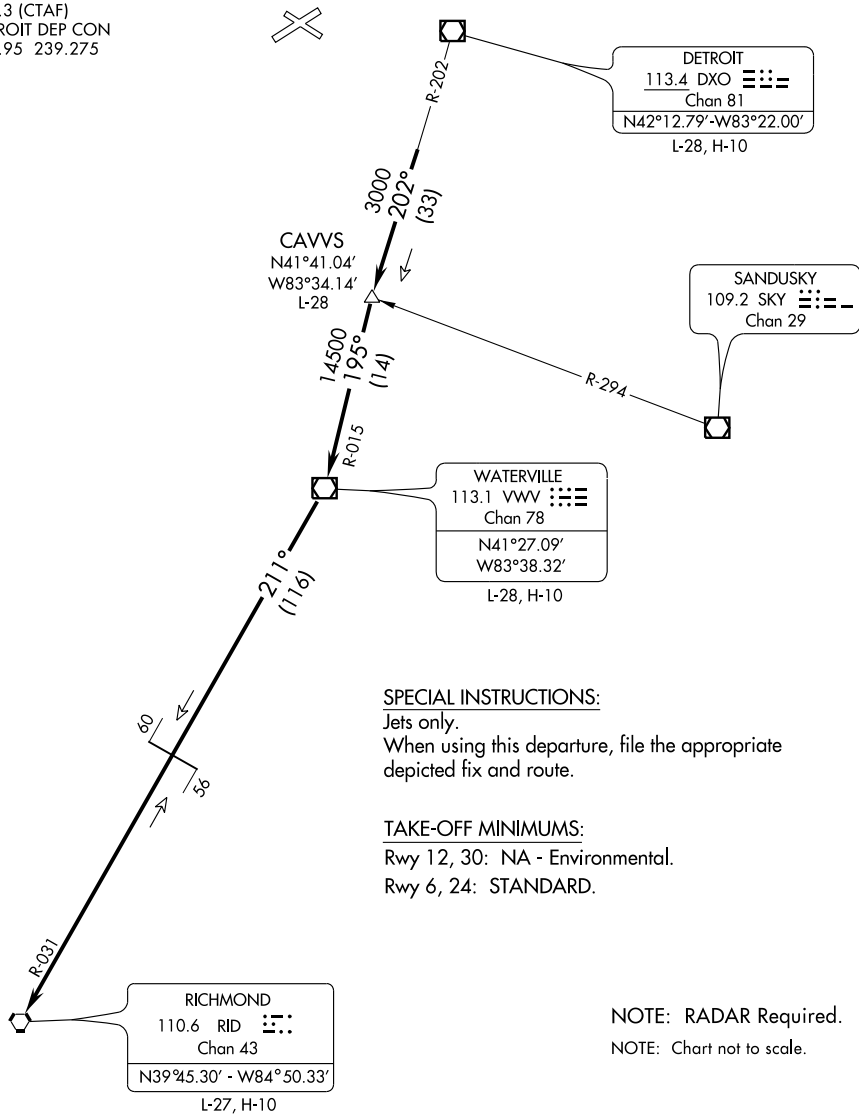
SPECIAL INSTRUCTIONS:

When using this departure, file the appropriate depicted departure fix and route. Aircraft landing/overflying Lansing (LAN) or overflying Flint (FNT) at 10,000 feet or below, file via EARVN. Aircraft landing Flint (FNT) at 10,000 feet or below, file via LAYNE. Aircraft landing/overflying Toledo (TOL) at 10,000 feet or below, file via RUZZL. Aircraft over HARWL must file FL220 and below.

TAKE-OFF OBSTACLES:

- Rwy 6: Multiple trees beginning 442' from DER, 47' right of centerline, up to 79' AGL/899' MSL. Building 312' from DER, 479' right of centerline, 15' AGL/838' MSL. Multiple trees beginning 635' from DER, 182' left of centerline, up to 59' AGL/887' MSL. Building 99' from DER, 351' left of centerline, 22' AGL/849' MSL.
- Rwy 24: Multiple trees beginning 479' from DER, 475' left of centerline, up to 100' AGL/929' MSL. Multiple trees beginning 462' from DER, 486' right of centerline, up to 50' AGL/885' MSL. Terrain 138' from DER, 475' right of centerline, 0' AGL/837' MSL.

ATIS 134.55
CLNC DEL
121.6
GND CON
121.6
ANN ARBOR TOWER ★
120.3 (CTAF)
DETROIT DEP CON
118.95 239.275



(NARRATIVE ON FOLLOWING PAGE)

EC-1. 17 DEC 2009 to 14 JAN 2010



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 6/24: Climb via assigned heading for radar vectors, thence. . . .

. . . . To intercept DXO VOR/DME R-202 to CAVVS INT/DXO 33 DME, then via VWV R-015 to VWV VOR/DME. Then right turn via VWV R-211 and RID R-031 to RID VORTAC. Maintain 3,000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

- Rwy 6: Multiple trees beginning 442' from DER, 47' right of centerline, up to 79' AGL/899' MSL.
Building 312' from DER, 479' right of centerline, 15' AGL/838' MSL.
Multiple trees beginning 635' from DER, 182' left of centerline, up to 59' AGL/887' MSL.
Building 99' from DER, 351' left of centerline, 22' AGL/849' MSL.
- Rwy 24: Multiple trees beginning 479' from DER, 473' left of centerline, up to 100' AGL/929' MSL.
Multiple trees beginning 462' from DER, 486' right of centerline, up to 50' AGL/885' MSL.
Terrain 138' from DER, 475' right of centerline, 0' AGL/837' MSL.

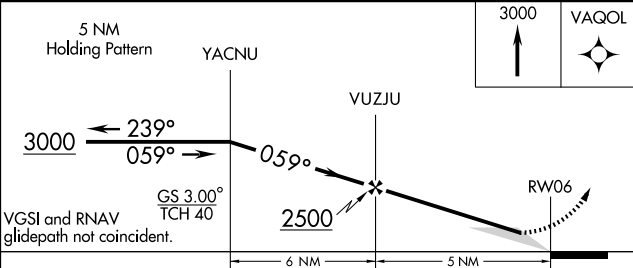
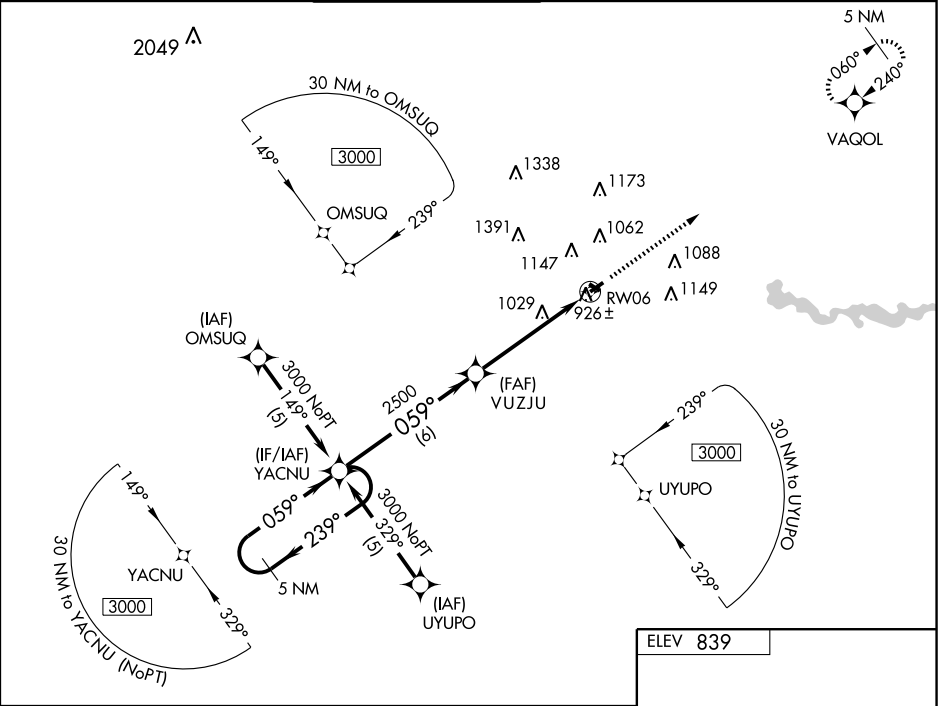
WAAS CH 77601 W06A	APP CRS 059°	Rwy Idg TDZE Apt Elev	3505 831 839
--	------------------------	-----------------------------	---

RNAV (GPS) RWY 6
ANN ARBOR MUNI (ARB)

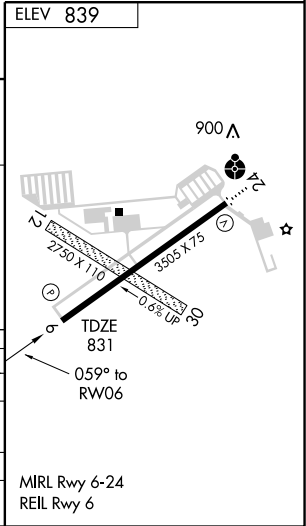
▽ DME/DME RNP-0.3 NA. If local altimeter setting not received, use Willow Run altimeter setting and increase all DAs/MDAs 40 feet. Baro-VNAV NA when using Willow Run altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (117°F).

MISSED APPROACH: Climb to 3000 direct VAQOL and hold.

ATIS 134.55	DETROIT APP CON 118.95 363.2	ANN ARBOR TOWER ★ 120.3 (CTAF) 0	GND CON 121.6	CLNC DEL 121.6	UNICOM 123.0
-----------------------	--	--	-------------------------	--------------------------	------------------------



CATEGORY	A	B	C	D
LPV DA	1109-1 278 (300-1)			
LNAV/ DA VNAV	1322-1¾ 491 (500-1¾)			
LNAV MDA	1340-1	509 (600-1)	1340-1½	509 (600-1½)
CIRCLING	1500-1¾ 661 (700-1¾)			1500-2 661 (700-2)



WAAS CH 81901 W24A	APP CRS 240°	Rwy Idg TDZE Apt Elev	3505 831 839
--	------------------------	-----------------------------	---

▼

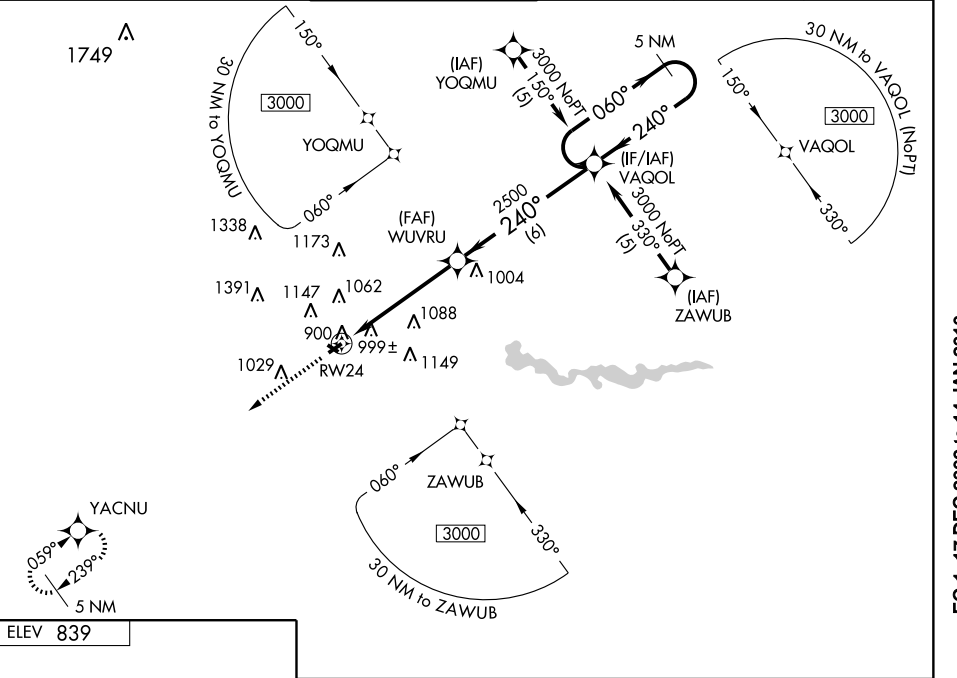
▲

DME/DME RNP-0.3 NA. If local altimeter setting not received, use Willow Run altimeter setting and increase all DAs/MDAs 40 feet. Baro-VNAV NA when using Willow Run altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (117°F). Inoperative table does not apply. Visibility reduction by helicopters NA.

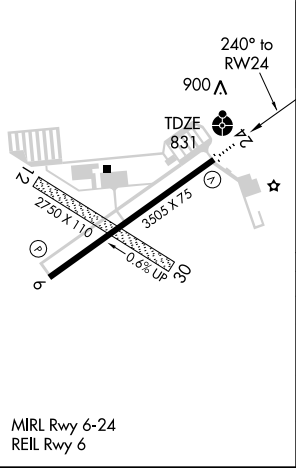
ODALS

MISSED APPROACH: Climb to 3000 direct YACNU and hold.

ATIS 134.55	DETROIT APP CON 118.95 363.2	ANN ARBOR TOWER ★ 120.3 (CTAF) 0	GND CON 121.6	CLNC DEL 121.6	UNICOM 123.0
-----------------------	--	---	-------------------------	--------------------------	------------------------



ELEV 839



<div>3000 ↑</div>		<div>YACNU ✦</div>		<div>5 NM Holding Pattern</div>	
<div>RW24 ↙</div>		<div>WUVRU ✕</div>		<div>VAQOL ↗</div>	
		<div>240°</div>		<div>060° → ← 240° 3000 GS 3.00° TCH 40</div>	
		<div>2500</div>		<div>VGSI and RNAV glidepath not coincident.</div>	
<div>5.1 NM</div>		<div>6 NM</div>			
CATEGORY	A	B	C	D	
LPV DA	1129-1 298 (300-1)				
LNAV/ DA VNAV	1340-1¾ 509 (600-1¾)				
LNAV MDA	1300-1 469 (500-1)		1300-1¼ 469 (500-1¼)	1300-1½ 469 (500-1½)	
CIRCLING	1500-1¾ 661 (700-1¾)			1500-2 661 (700-2)	

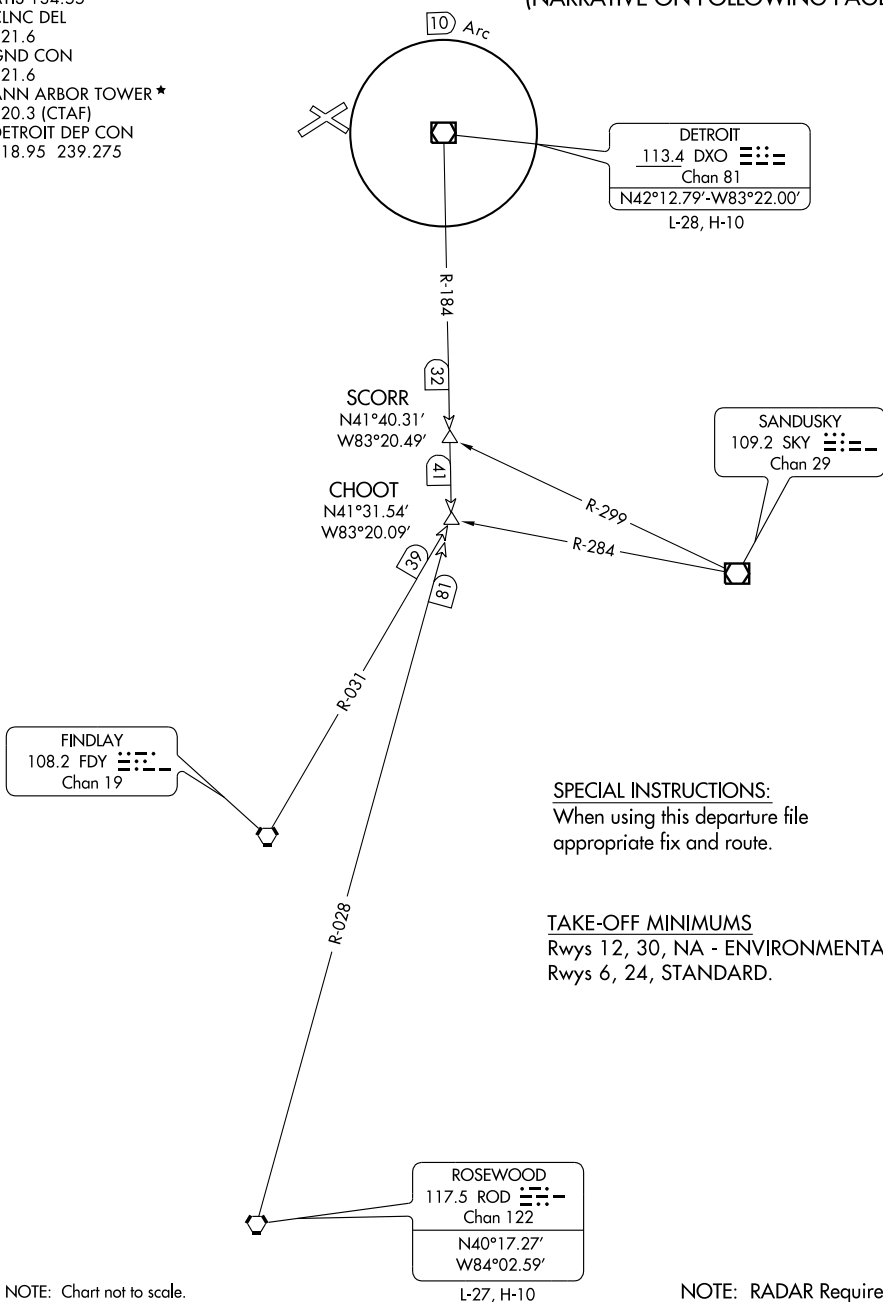
MIRL Rwy 6-24
REIL Rwy 6

ROSEWOOD TWO DEPARTURE SL-5506 (FAA)

ANN ARBOR, MICHIGAN

ATIS 134.55
CLNC DEL
121.6
GND CON
121.6
ANN ARBOR TOWER ★
120.3 (CTAF)
DETROIT DEP CON
118.95 239.275

(NARRATIVE ON FOLLOWING PAGE)



NOTE: Chart not to scale.

NOTE: RADAR Required.



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 6/24: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude / flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES

- Rwy 6: Multiple trees beginning 442' from DER, 47' right of centerline, up to 79' AGL/899' MSL. Building 312' from DER, 479' right of centerline, 15' AGL/838' MSL. Multiple trees beginning 635' from DER, 182' left of centerline, up to 59' AGL/887' MSL. Building 99' from DER, 351' left of centerline, 22' AGL/849' MSL.
- Rwy 24: Multiple trees beginning 479' from DER, 473' left of centerline, up to 100' AGL/929' MSL. Multiple trees beginning 462' from DER, 486' right of centerline, up to 50' AGL/885' MSL. Terrain 138' from DER, 475' right of centerline, 0' AGL/837' MSL.

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON

127.5 239.275

WILLOW RUN ATIS 127.425

PONTIAC ATIS 125.025

COLEMAN A. YOUNG ATIS 124.875

WINDSOR ATIS 134.5

SELFREDGE ATIS 125.325 270.1

SPRTN

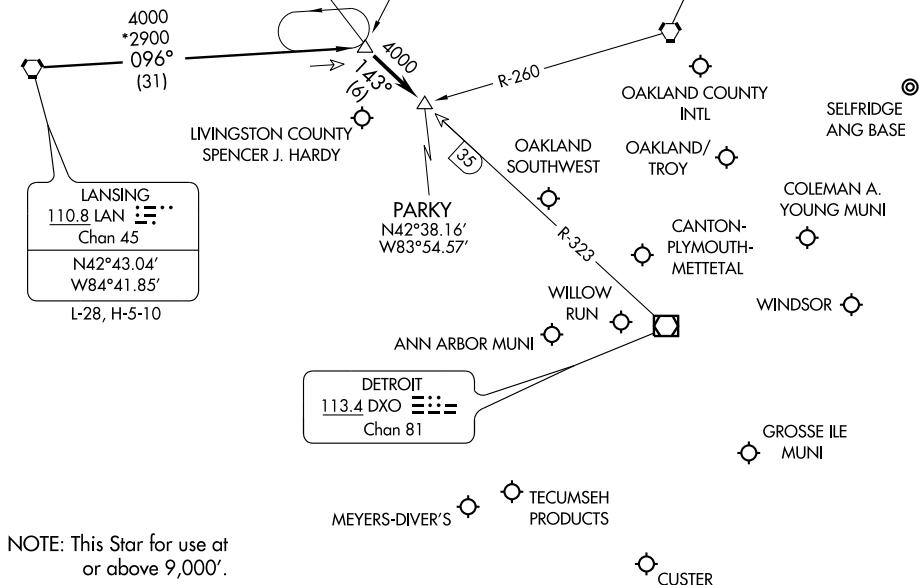
N42°42.52'-W84°00.23'

VERTICAL NAVIGATION

PLANNING INFORMATION

TURBOJETS/TURBOPROPS:

Expect clearance to cross at 9000'.

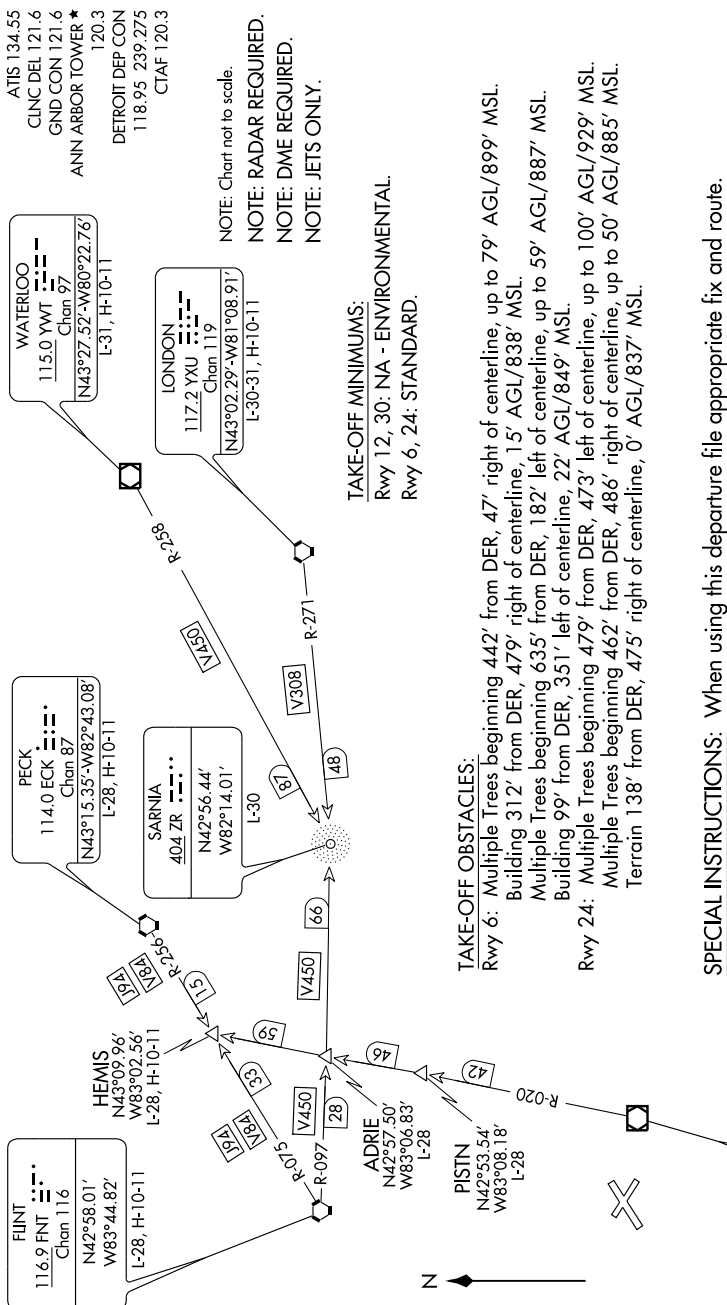


LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence

. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ,

1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence

. . . . Expect radar vectors to final approach course.



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 6/24: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

EC-1. 17 DEC 2009 to 14 JAN 2010

VORTAC SVM 114.3 Chan 90	APP CRS 035°	Rwy Idg 3505 TDZE 830 Apt Elev 839
--	------------------------	---

VOR RWY 6
ANN ARBOR MUNI (ARB)



When control tower closed, use Detroit Willow Run altimeter setting.

MISSED APPROACH: Climb to 3000
direct SVM VORTAC and hold.

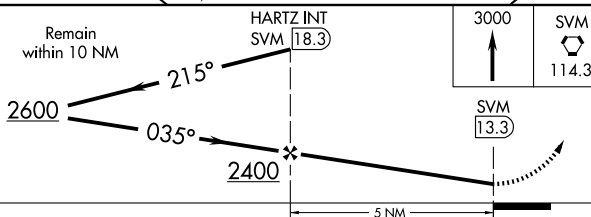
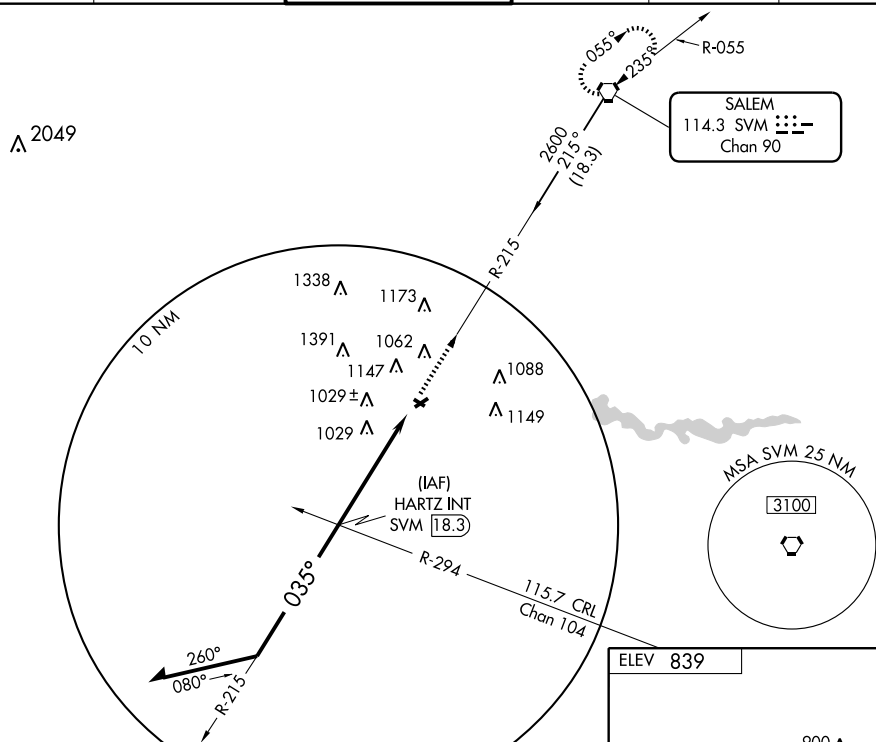
ATIS
134.55

DETROIT APP CON
118.95 363.2

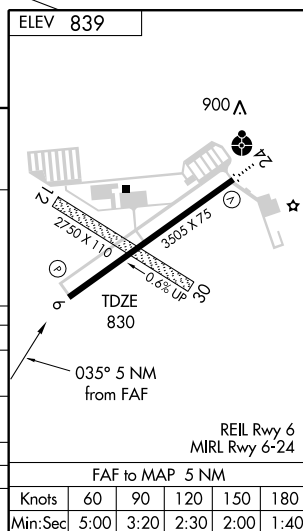
ANN ARBOR TOWER ★
120.3 (CTAF) L

GND CON
121.6

CLNC DEL
121.6

UNICOM
123.0

CATEGORY	A	B	C	D
S-6	1320-1	490 (500-1)	1320-1½ 490 (500-1½)	1320-1½ 490 (500-1½)
CIRCLING	1500-1	661 (700-1)	1500-1¾ 661 (700-1¾)	1500-2 661 (700-2)
WILLOW RUN ALTIMETER SETTING MINIMUMS				
S-6	1340-1	510 (600-1)	1340-1 ½	510 (600-1½)
CIRCLING	1520-1	681 (700-1)	1520-2 681 (700-2)	1520-2¼ 681 (700-2¼)



▼

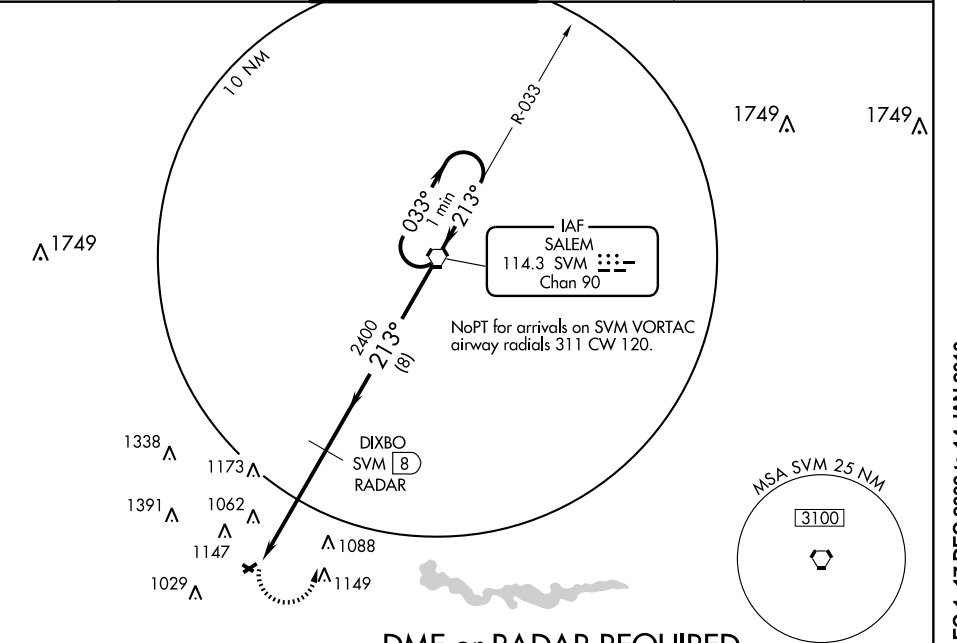
▲

Inoperative table does not apply.
When control tower closed, use
Detroit Willow Run altimeter setting.

ODALS

MISSED APPROACH: Climbing left turn
to 3000 direct SVM VORTAC and hold.

ATIS 134.55	DETROIT APP CON 118.95 363.2	ANN ARBOR TOWER ★ 120.3 (CTAF) 0	GND CON 121.6	CLNC DEL 121.6	UNICOM 123.0
-----------------------	--	---	-------------------------	--------------------------	------------------------



ELEV 839

213° 4.7 NM
from FAF

900

TDZE 830

MIRL Rwy 6-24
REIL Rwy 6

FAF to MAP 4.7 NM

Knots	60	90	120	150	180
Min:Sec	4:42	3:08	2:21	1:53	1:34

DME or RADAR REQUIRED

3000 SVM 114.3

DIXBO SVM 8 RADAR

VORTAC

One Minute Holding Pattern

2700

2400

4.7 NM

8 NM

CATEGORY	A	B	C	D
S-24	1460-1 630 (700-1)		1460-1¾ 630 (700-1¾)	1460-2 630 (700-2)
CIRCLING	1500-1 661 (700-1)		1500-1¾ 661 (700-1¾)	1500-2 661 (700-2)
WILLOW RUN ALTIMETER SETTING MINIMUMS				
S-24	1480-1 650 (700-1)		1480-1¾ 650 (700-1¾)	1480-2 650 (700-2)
CIRCLING	1520-1 681 (700-1)		1520-2 681 (700-2)	1520-2½ 681 (700-2½)

EC-1.17 DEC 2009 to 14 JAN 2010

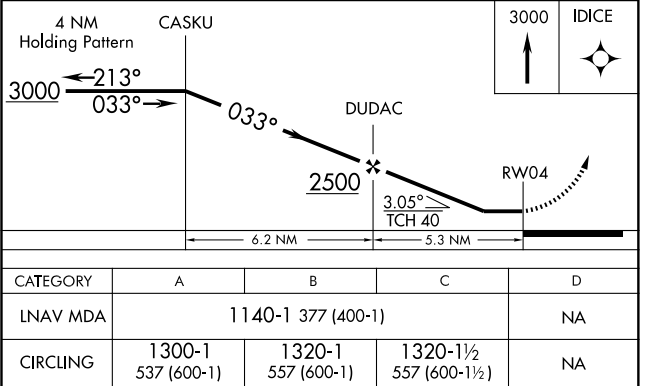
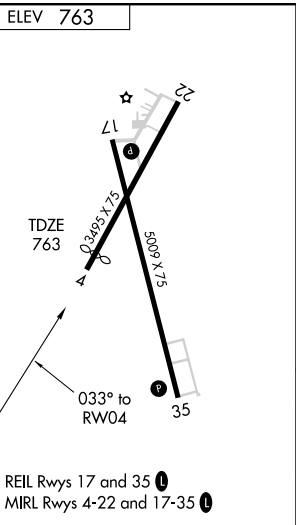
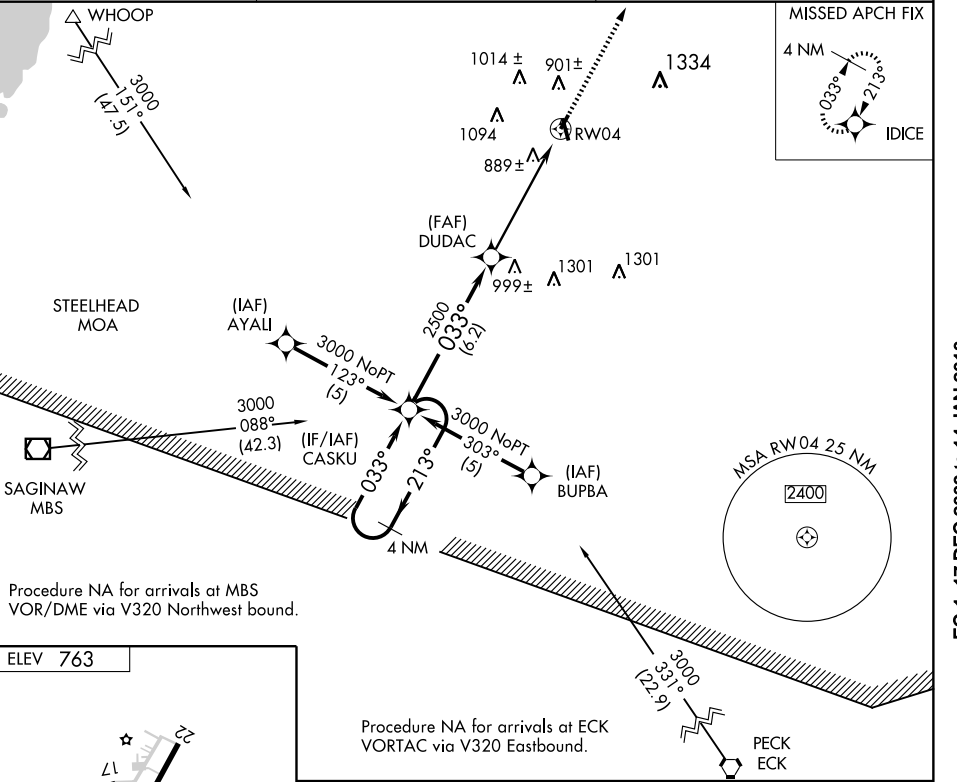
▼

▲

DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.
When local altimeter setting not received, use MBS INTL altimeter setting and increase all MDAs 140 feet, and Cat C visibility ½ mile.

MISSED APPROACH: Climb to 3000 direct IDICE and hold.

AWOS-3 108.2	CLEVELAND CENTER 127.7 307.8	UNICOM 122.975 (CTAF) 0
-----------------	---------------------------------	----------------------------

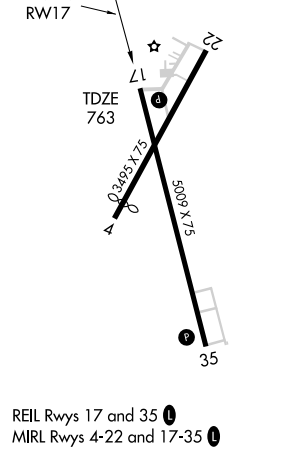
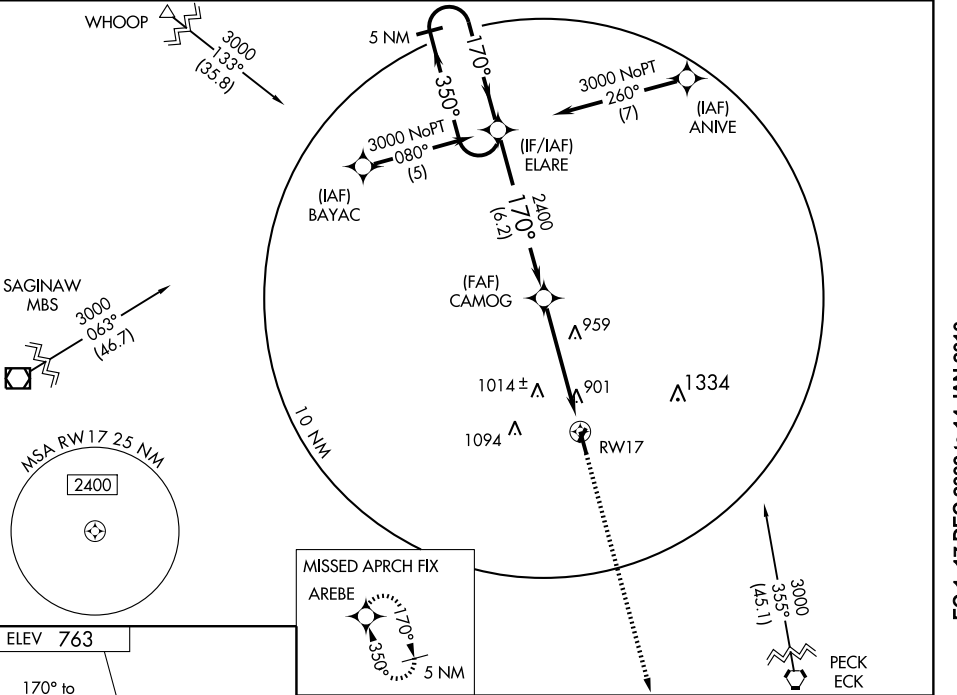


EC-1. 17 DEC 2009 to 14 JAN 2010

When VGSI inop, procedure NA at night. DME/DME RNP-0.3 NA. Baro-VNAV NA when using Saginaw Intl altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). Visibility reduction by helicopters NA. If local altimeter setting not received, use Saginaw Intl altimeter setting and increase all DAs 129 feet and all MDAs 140 feet.

MISSED APPROACH: Climb to 3000 direct AREBE and hold.

AWOS-3 108.2	CLEVELAND CENTER 127.7 307.8	UNICOM 122.975 (CTAF) 0
-----------------	---------------------------------	----------------------------



5 NM Holding Pattern			
ELARE			
CAMOG			
RW17			
3000 ← 350° 170° → 2400			
GS 3.00° TCH 40			
6.2 NM 4.9 NM			
CATEGORY	A	B	C
LPV DA	1075-1	312 (400-1)	NA
LNAV/VNAV DA	1352-2	589 (600-2)	NA
LNAV MDA	1220-1	457 (500-1)	1220-1¼ 457 (500-1¼)
CIRCLING	1300-1 537 (600-1)	1320-1 557 (600-1)	1320-1½ 557 (600-1½)

EC-1.17 DEC 2009 to 14 JAN 2010

APP CRS	Rwy Idg	3495
213°	TDZE	763
	Apt Elev	763

RNAV (GPS) RWY 22

BAD AXE / HURON COUNTY MEMORIAL (BAX)

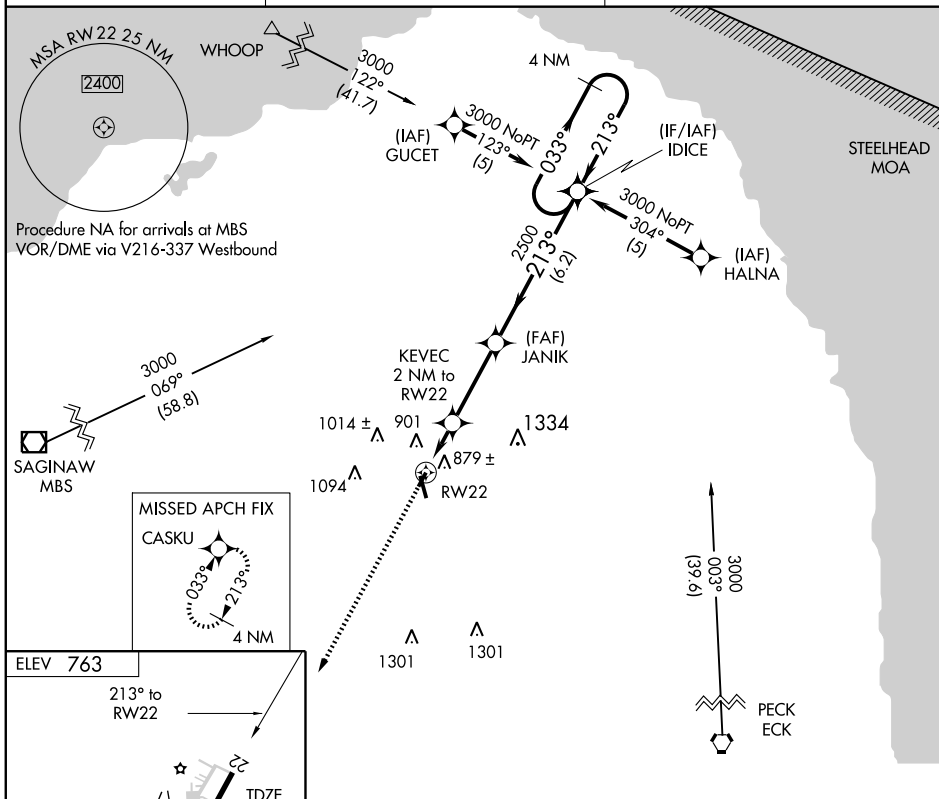
- T** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.
A When local altimeter setting not received, use MBS Intl altimeter setting and increase all MDAs 140 feet, and Cat C visibility ½ mile.

MISSED APPROACH: Climb to 3000 direct CASKU and hold.

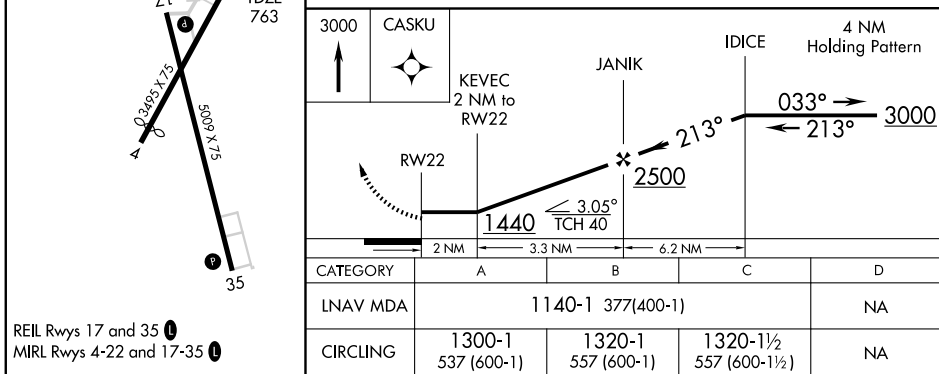
AWOS-3
108.2

CLEVELAND CENTER
127.7 307.8

UNICOM
122.975 (CTAF) **L**



EC-1. 17 DEC 2009 to 14 JAN 2010



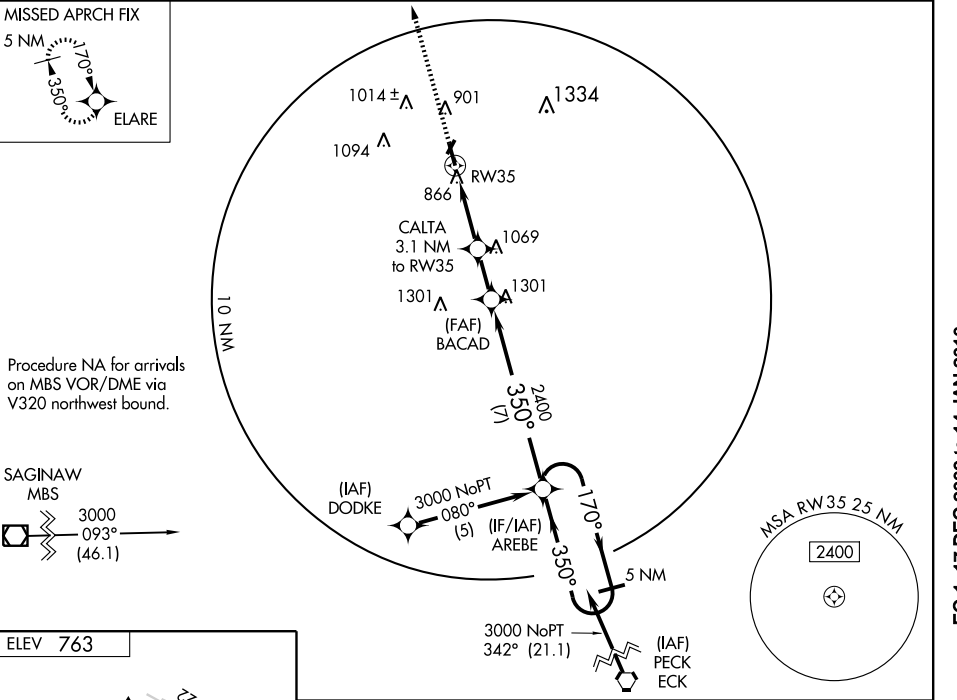
▼

▲

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). VDP and Baro/VNAV NA when using Saginaw Intl altimeter setting. Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA. If local altimeter setting not received, use Saginaw Intl altimeter setting and increase all DA's 129 feet and all MDAs 140 feet.

MISSED APPROACH: Climb to 3000 direct ELARE and hold.

AWOS-3 108.2	CLEVELAND CENTER 127.7 307.8	UNICOM 122.975 (CTAF) 0
-----------------	---------------------------------	----------------------------



3000

↑

ELARE

* 1.1 NM to RW35

RW35

* LNAV only.

CALTA 3.1 NM to RW35

BACAD

1780*

2400

AREBE

170°

350°

3000

GS 3.00° TCH 40

VGSI and RNAV glidepath not coincident.

1.1

2 NM

1.9 NM

7 NM

5 NM Holding Pattern

CATEGORY	A	B	C	D
LPV DA	1113-1¼ 357 (400-1¼)			NA
LNAV/VNAV DA	1154-1½ 398 (400-1½)			NA
LNAV MDA	1120-1 364 (400-1)			NA
CIRCLING	1300-1 537 (600-1)	1320-1 557 (600-1)	1320-1½ 557 (600-1½)	NA

VOR RWY 4

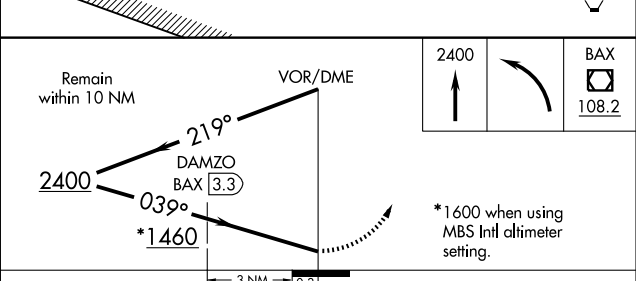
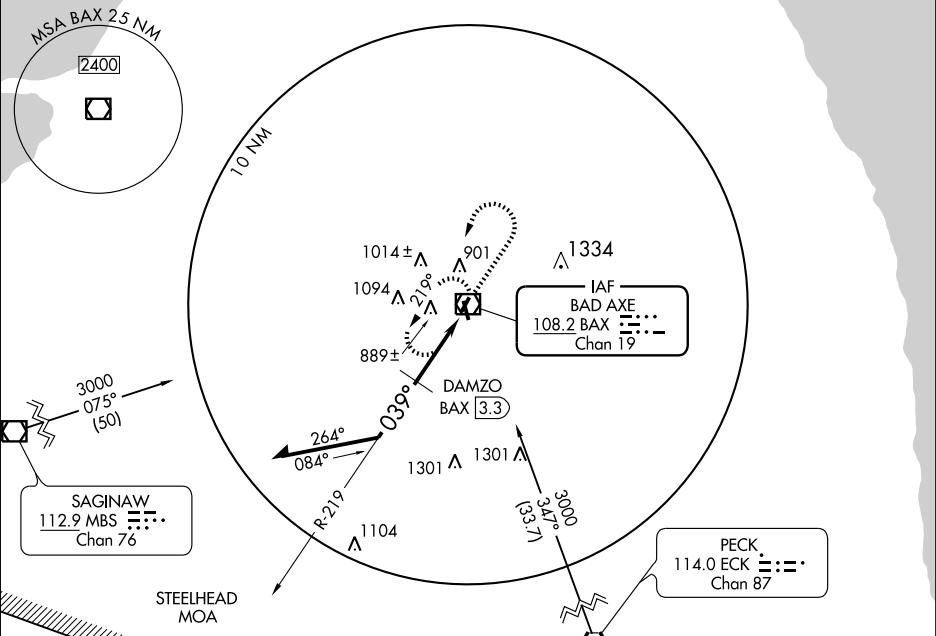
VOR/DME BAX	APP CRS	Rwy Idg	3195
108.2	039°	TDZE	763
Chan 19		Apt Elev	763

BAD AXE / HURON COUNTY MEMORIAL (BAX)

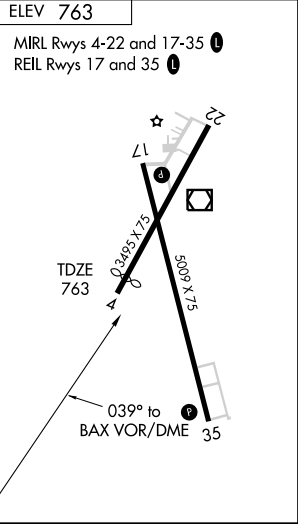
▼ Visibility reduction by helicopters NA. When local altimeter setting not received, use MBS Intl altimeter setting and increase all MDAs 140 feet, and Cat B visibility ¼ mile, Cat C visibility ½ mile, and DAMZO fix minimums visibility Cat C ½ mile.

▲ NA MISSED APPROACH: Climb to 2400 then left turn direct BAX VOR/DME and hold.

AWOS-3 108.2	CLEVELAND CENTER 127.7 307.8	UNICOM 122.975 (CTAF) 0
-----------------	---------------------------------	----------------------------



CATEGORY	A	B	C	D
S-4	1460-1 697 (700-1)		1460-2 697 (700-2)	NA
CIRCLING	1460-1 697 (700-1)		1460-2 697 (700-2)	NA
DAMZO FIX MINIMUMS				
S-4	1140-1 377 (400-1)			NA
CIRCLING	1300-1 537 (600-1)	1320-1 557 (600-1)	1320-1½ 557 (600-1½)	NA



VOR/DME BAX 108.2 Chan 19	APP CRS 207°	Rwy Idg 3495 TDZE 763 Apt Elev 763
---	------------------------	---

VOR RWY 22

BAD AXE / HURON COUNTY MEMORIAL (BAX)

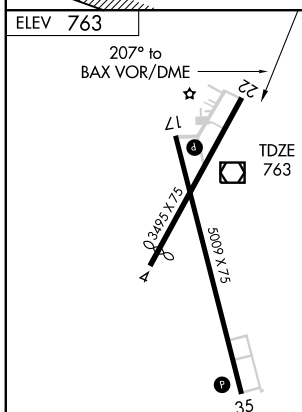
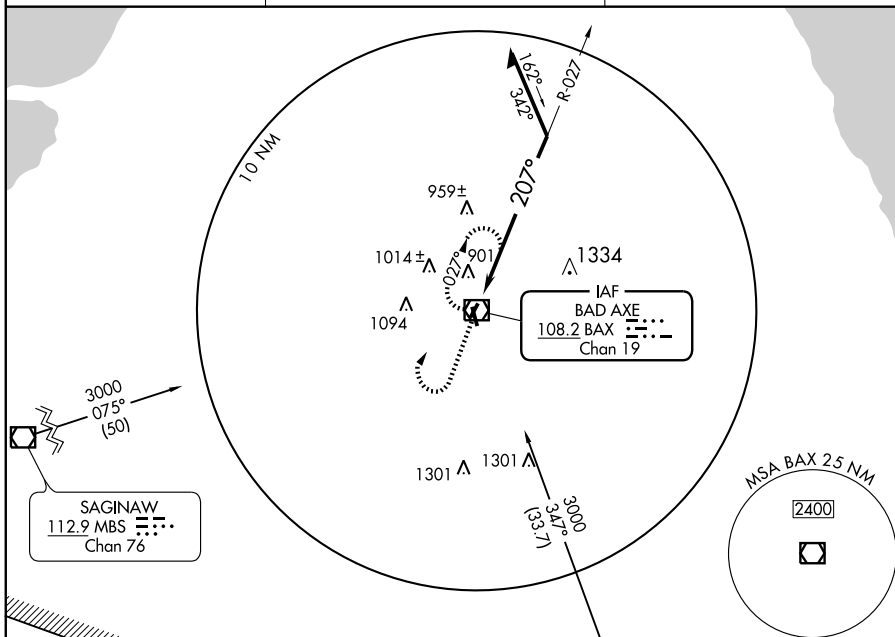
▼ Visibility reduction by helicopters NA. When local altimeter setting not received, use MBS Intl altimeter setting and increase all MDAs 140 feet, and Cat C visibility ½ mile.

MISSED APPROACH: Climb to 2400 then right turn direct BAX VOR/DME and hold.

AWOS-3
108.2

CLEVELAND CENTER
127.7 307.8

UNICOM
122.975 (CTAF) **L**

STEELHEAD
MOA

PECK
114.0 ECK $\equiv::\equiv$
Chan 87

2400 ↑		BAX  <u>108.2</u>
-----------	---	--

VOR/DME

027° 2400

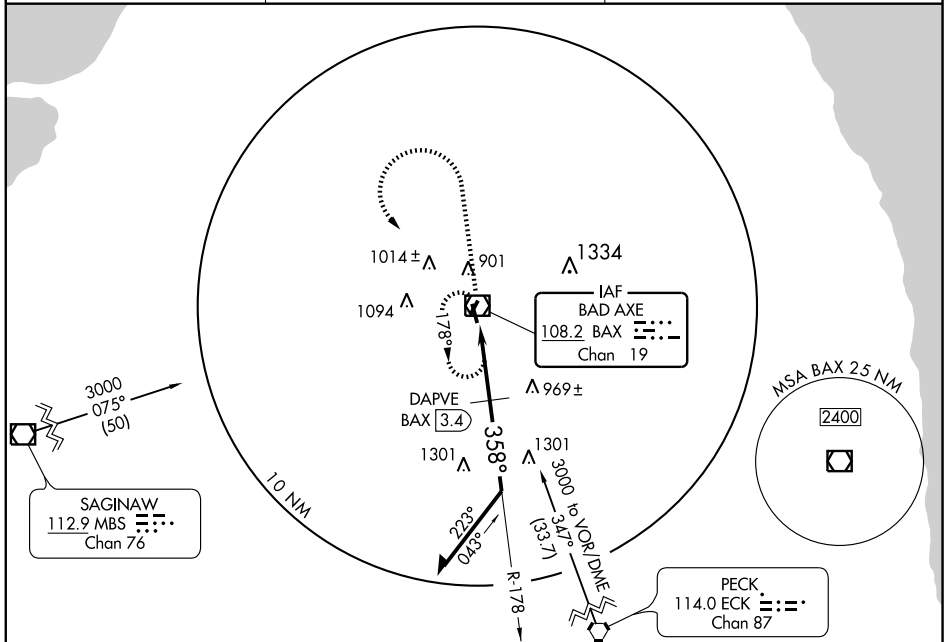
207° 2400

Remain within 10 NM

CATEGORY	A	B	C	D
S-22	1300-1 537 (600-1)		1300-1½ 537 (600-1½)	NA
CIRCLING	1300-1 537 (600-1)	1320-1 557 (600-1)	1320-1½ 557 (600-1½)	NA

REIL Rwys 17 and 35 **L**
MIRL Rwys 4-22 and 17-35 **L**

AWOS-3 108.2	CLEVELAND CENTER 127.7 307.8	UNICOM 122.975 (CTAF) 0
------------------------	--	--



ELEV 763

MIRL Rwy 4-22 and 17-35 **(1)**
 REIL Rwy 17 and 35 **(1)**

VOR/DME 113.7
DME 132.1
CH 34

1800 when using Saginaw
 Intl altimeter setting.

178°
2400
358°
1660*
3.04°
TCH 40

358° to BAX VOR/DME
TDZE 756
35

CATEGORY	A	B	C	D
S-35	1660-1¼ 904 (900-1¼)	1660-2¾ 904 (900-2¾)	NA	NA
CIRCLING	1660-1¼ 897 (900-1¼)	1660-2¾ 897 (900-2¾)	NA	NA

DAPVE FIX MINIMUMS

CATEGORY	A	B	C	D
S-35	1220-1 464 (500-1)	1220-1¼ 464 (500-1¼)	NA	NA
CIRCLING	1300-1 537 (600-1)	1320-1 557 (600-1)	1320-1½ 557 (600-1½)	NA

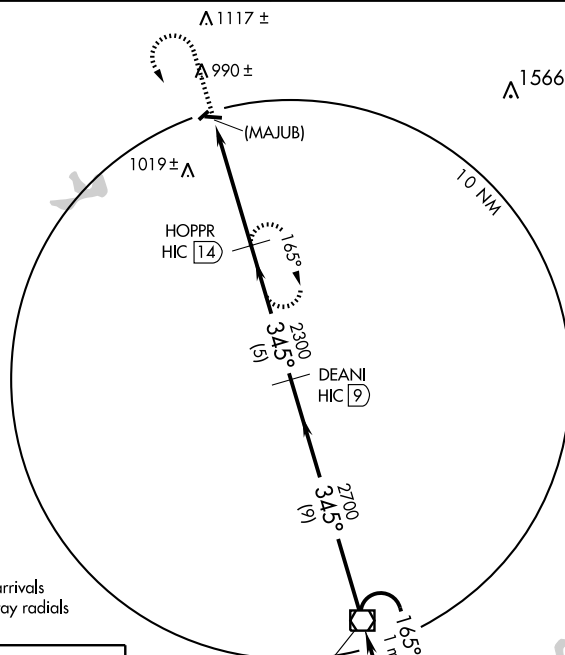
VOR/DME HIC 117.6 Chan 123	APP CRS 345°	Rwy Idg TDZE Apt Elev N/A N/A 828
--	------------------------	---

VOR/DME or GPS-A
BALDWIN MUNI (7D3)

T	Use Manistee altimeter setting.
A NA	Procedure not authorized at night.

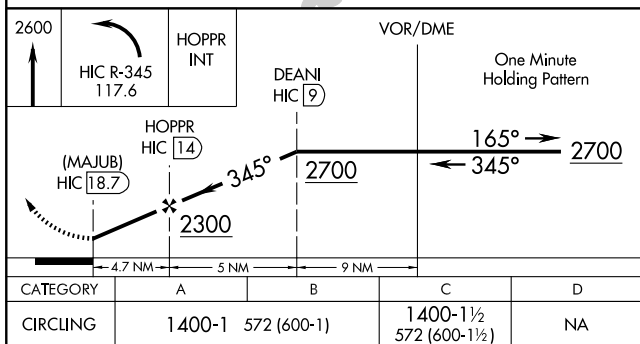
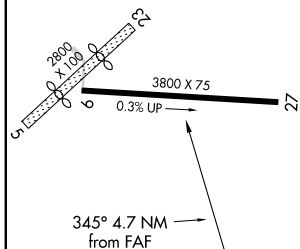
MISSED APPROACH: Climb to 2600, then left turn via the HIC VOR/DME R-345 to HOPPR/14 DME and hold.

MINNEAPOLIS CENTER
120.85 322.35

CTAF
122.9

No procedure turn for arrivals
on HIC VOR/DME airway radials
087 CW 211.

ELEV 828



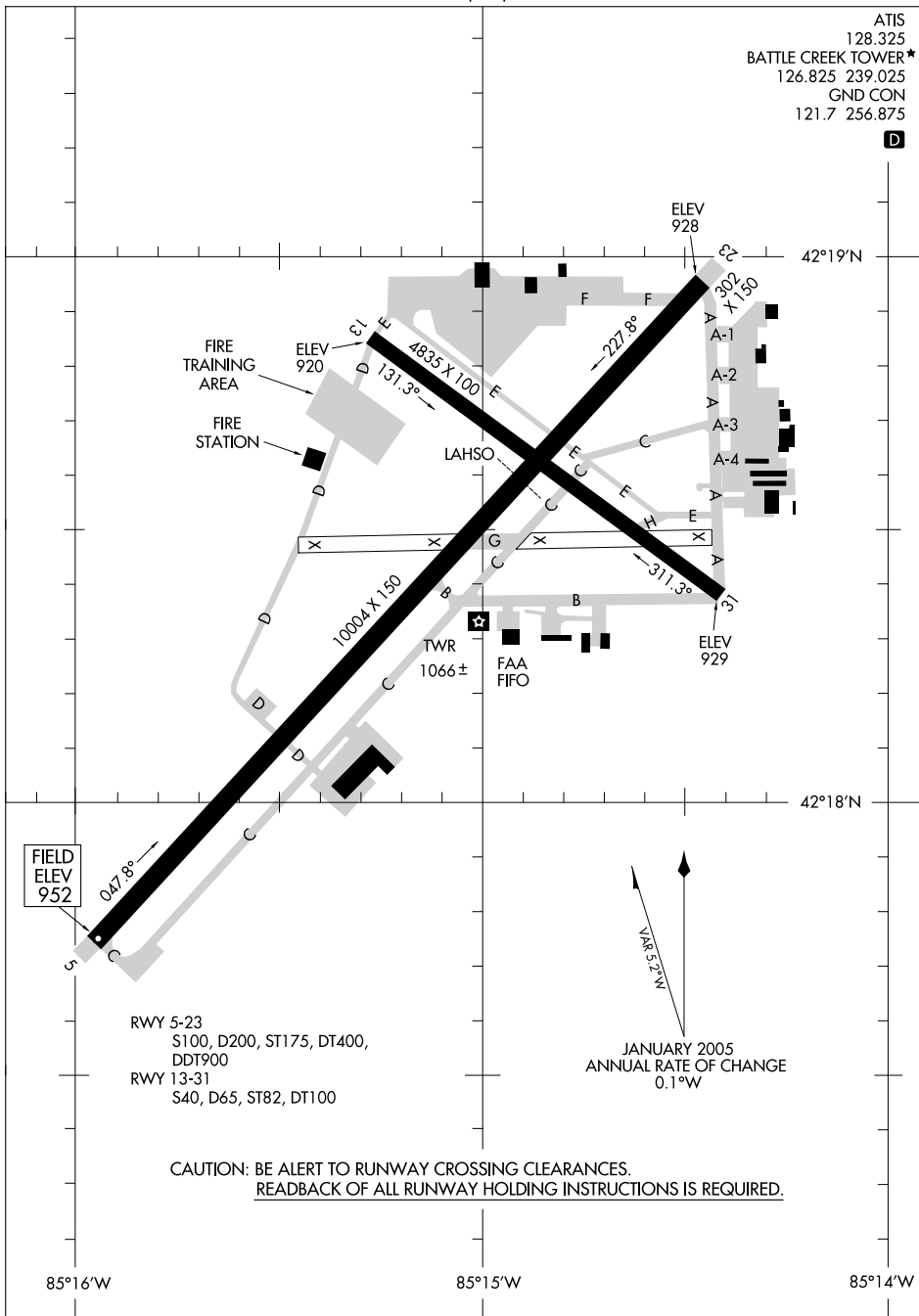
AIRPORT DIAGRAM

AL-41 (FAA)

BATTLE CREEK/ W.K. KELLOGG (BTL)
BATTLE CREEK, MICHIGAN

ATIS
128.325
BATTLE CREEK TOWER*
126.825 239.025
GND CON
121.7 256.875

D



EC-1, 17 DEC 2009 to 14 JAN 2010

VORTAC BTL
109.4
Chan 31

APCH CRS
231°

Rwy Idg 10,003
TDZE 929
Arpt Elev 952

JAL-41 [USAF]

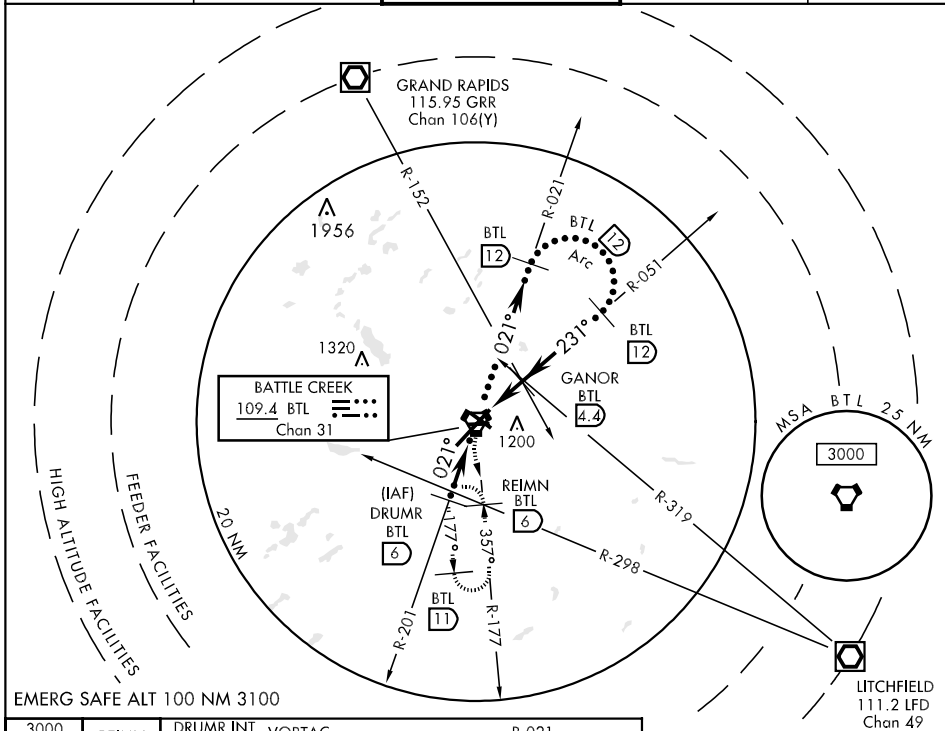
BATTLE CREEK/W. K. KELLOGG (KBTL)

NOTE: When Control Tower closed, except for operators with approved weather reporting service, use Grand Rapids altimeter setting.

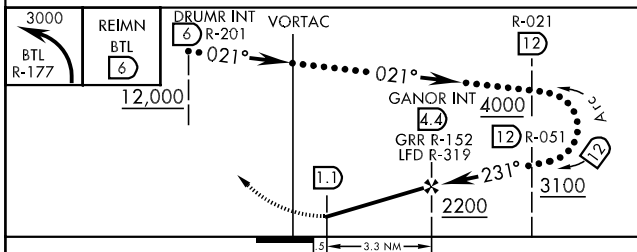


MISSED APPROACH: Climbing left turn to 3000 via BTL VORTAC R-177 to REIMN Int and hold.

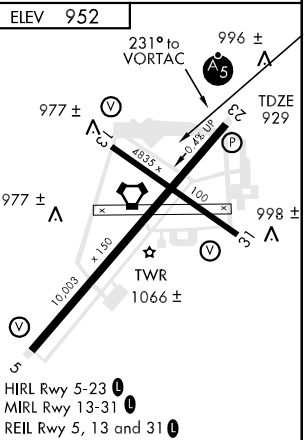
ATIS 128.325	KALAMAZOO APP CON 119.2 340.9	BATTLE CREEK TOWER ★ 126.825 (CTAF) 239.025	GND CON 121.7 256.875	ASR
-----------------	----------------------------------	--	--------------------------	-----



EMERG SAFE ALT 100 NM 3100



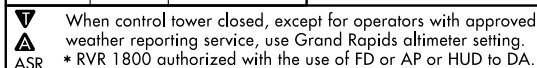
CATEGORY	C	D	E
S-23	1380/40 451 (500-3/4)	1380/50 451 (500-1)	
CIRCLING	1480-1 1/2 528 (600-1 1/2)	1520-2 568 (600-2)	1740-2 3/4 788 (800-2 3/4)
GRAND RAPIDS ALTIMETER SETTING MINIMUMS			
S-23	1540-1 1/4 611 (700-1 1/4)	1540-1 1/2 611 (700-1 1/2)	1540-1 3/4 611 (700-1 3/4)
CIRCLING	1640-2 688 (700-2)	1680-2 1/4 728 (800-2 1/4)	1900-3 948 (1000-3)



LOC I-BTL <u>110.5</u>	APP CRS 227°	Rwy Idg 10003 TDZE 929 Apt Elev 952
----------------------------------	------------------------	--

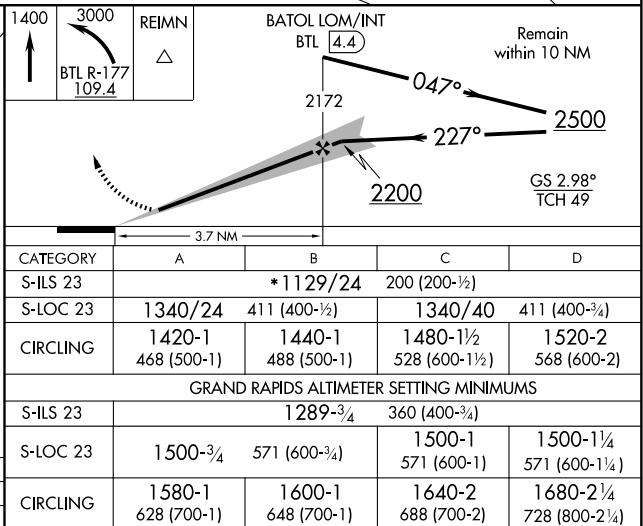
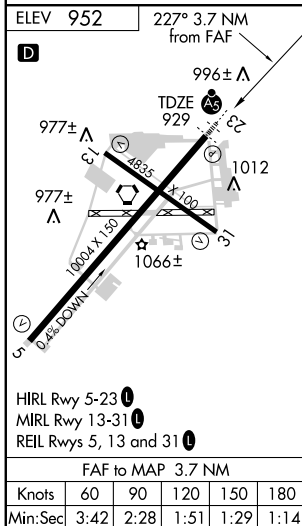
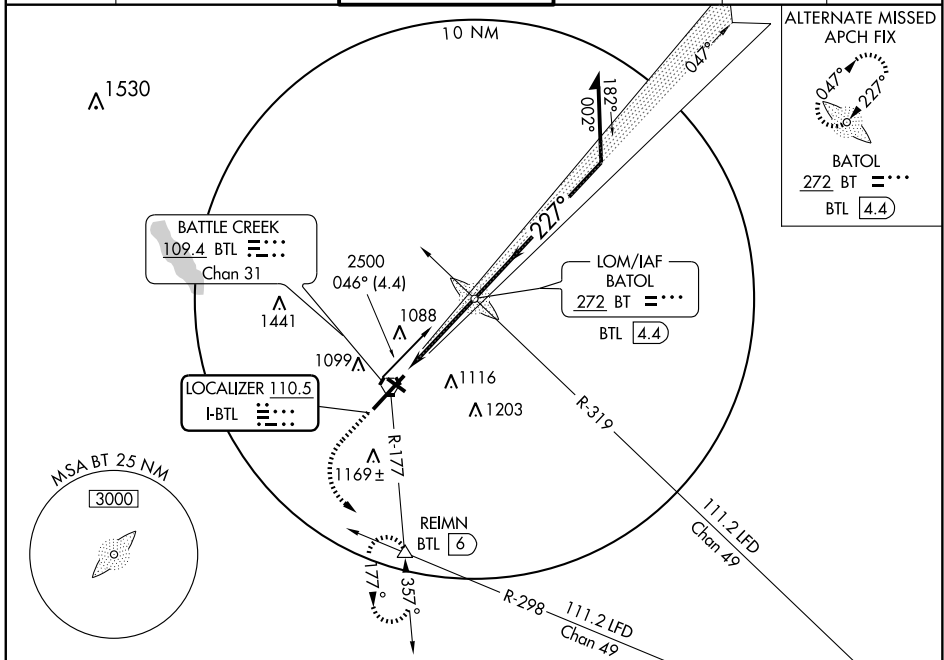
ILS or LOC RWY 23

BATTLE CREEK / W.K. KELLOGG (BTL)



MISSED APPROACH: Climb to 1400 then climbing left turn to 3000 via BTL R-177 to REIMN Int/BTL 6 DME and hold.



ATIS 128.325	KALAMAZOO APP CON ★ 119.2 340.9	BATTLE CREEK TOWER ★ 126.825 239.025	GND CON 121.7 256.875	UNICOM 122.95	CTAF 126.825 0
-----------------	------------------------------------	---	--------------------------	------------------	-------------------



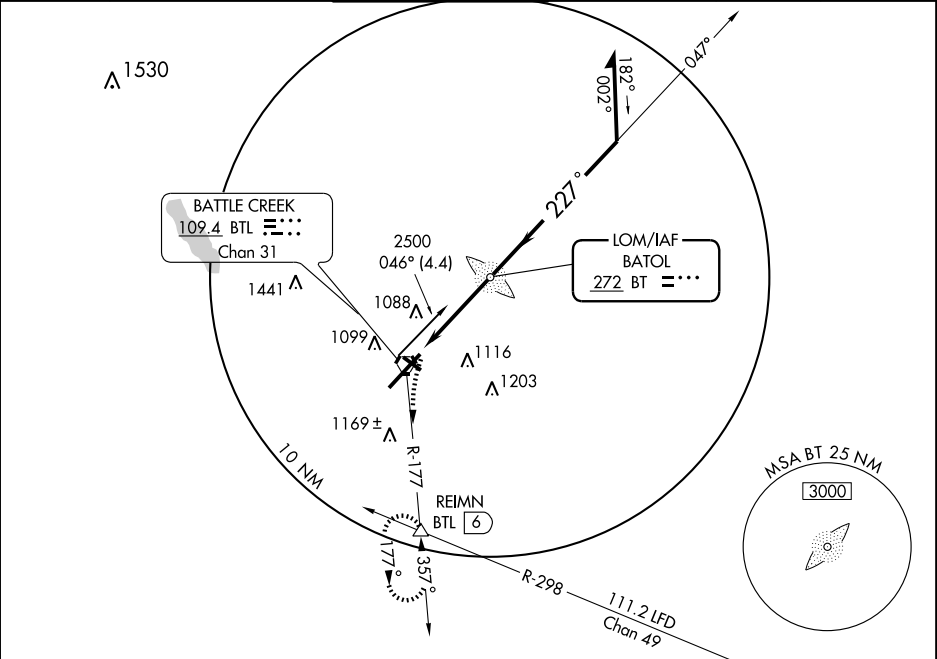
NDB RWY 23

BATTLE CREEK / W.K. KELLOGG (BTL)

LOM BT	APP CRS	Rwy Idg	10003
<u>272</u>	<u>227°</u>	TDZE	929
		Apt Elev	952

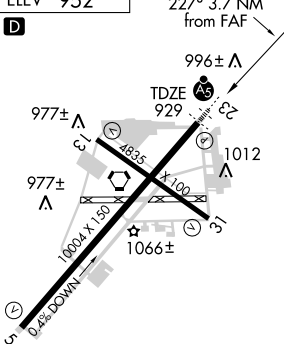
	When control tower closed, except for operators with approved weather reporting service, use Grand Rapids altimeter setting.	MALSR 	MISSED APPROACH: Climbing left turn to 3000 via BTL R-177 to REIMN Int/BTL 6 DME and hold.
---	--	--	--

ATIS	KALAMAZOO APP CON ★	BATTLE CREEK TOWER ★	GND CON	UNICOM	CTAF
128.325	119.2 340.9	126.825 239.025	121.7 256.875	122.95	126.825 0



ELEV 952

D



HIRL Rwy 5-23 **0**

MIRL Rwy 13-31 **0**

REIL Rws 5, 13 and 31 **0**

FAF to MAP 3.7 NM

Knots	60	90	120	150	180
Min:Sec	3:42	2:28	1:51	1:29	1:14

3000

REIMN

BTL R-177 109.4

LOM

2200

047°

227°

2500

3.7 NM

Remain within 10 NM

CATEGORY	A	B	C	D
S-23	1440/40	511 (500-¾)	1440/50 511 (500-1)	1440/60 511 (500-1¼)
CIRCLING	1440-1	488 (500-1)	1480-1½ 528 (600-1½)	1520-2 568 (600-2)

GRAND RAPIDS ALTIMETER SETTING MINIMUMS

S-23	1600-¾	671 (700-¾)	1600-1½ 671 (700-1½)	1600-2 671 (700-2)
CIRCLING	1600-1	648 (700-1)	1640-2 688 (700-2)	1680-2¼ 728 (800-2¼)

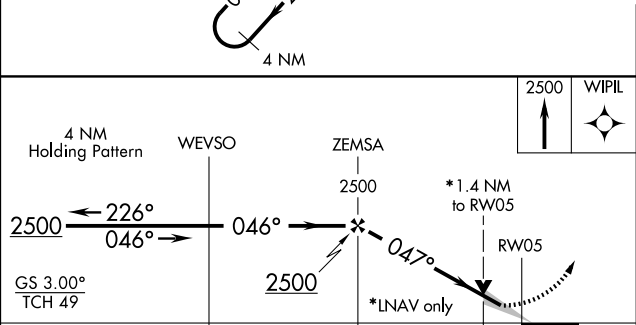
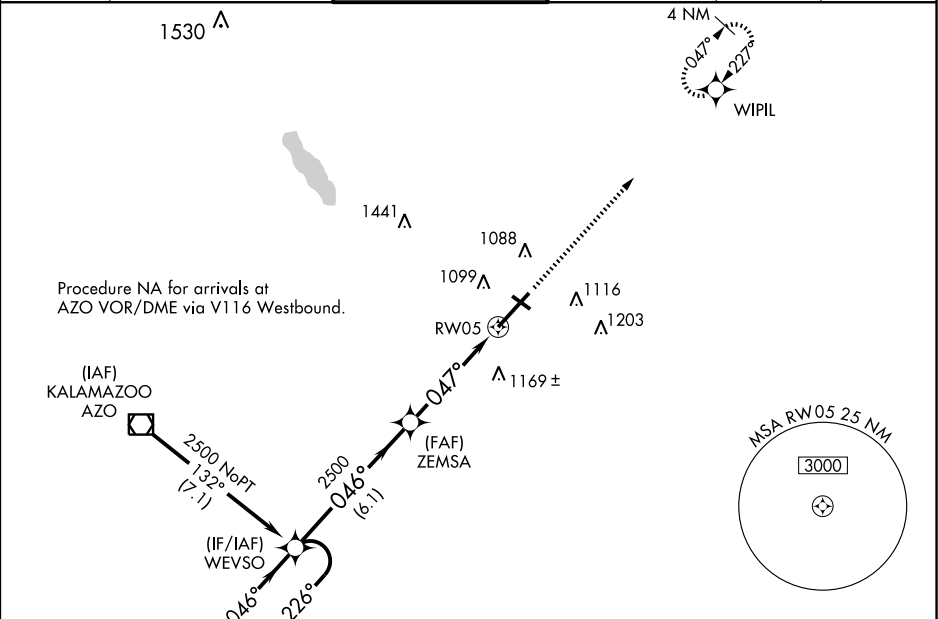
WAAS CH 90311 W05A	APP CRS 047°	Rwy Idg 10003 TDZE 952 Apt Elev 952
--	------------------------	--

RNAV (GPS) RWY 5
BATTLE CREEK / W.K. KELLOGG (BTL)

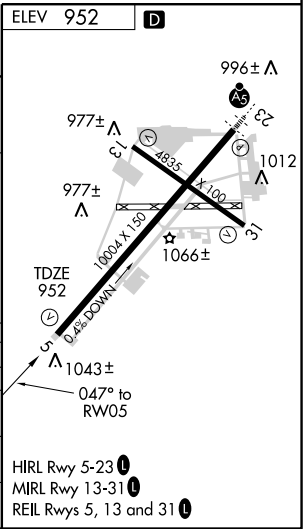
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Grand Rapids altimeter setting and increase LPV DA 107 feet, LNAV/VNAV DA 236 feet, and all MDA 120 ASR feet, increase LPV visibility ½ mile all Cats, and LNAV/VNAV visibility ¾ mile all Cats, LNAV Cat C and D visibility ½ mile, Circling Cat C and D visibility ½ mile. VDP and Baro-VNAV NA when using Grand Rapids altimeter setting.

MISSED APPROACH:
Climb to 2500 direct
WIPIL and hold.

ATIS 128.325	KALAMAZOO APP CON ★ 119.2 340.9	BATTLE CREEK TOWER ★ 126.825 239.025	GND CON 121.7 256.875	UNICOM 122.95	CTAF 126.825
------------------------	---	--	---------------------------------	-------------------------	------------------------



CATEGORY	A	B	C	D
LPV DA	1262-1	310 (400-1)		
LNAV/VNAV DA	1328-1¼	376 (400-1¼)		
LNAV MDA	1440-1	488 (500-1)	1440-1¼ 488 (500-1¼)	1440-1½ 488 (500-1½)
CIRCLING	1440-1 488 (500-1)	1500-1 548 (600-1)	1500-1½ 548 (600-1½)	1520-2 568 (600-2)



▼

▲

ASR

For inoperative MALSR, increase LPV all Cats visibility to RVR 5000. For inoperative MALSR when using Grand Rapids altimeter setting, increase LPV all Cats visibility to RVR 6000. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Grand Rapids altimeter setting and increase all DA 107 feet, and all MDA 120 feet. Increase LPV visibility all Cats to RVR 4000, LNAV/VNAV all Cats visibility to 1 ½ miles, and LNAV Cat C to RVR 5000, Cat D to RVR 6000. Increase Circling visibility Cats C/D ¼ mile. VDP and Baro-VNAV NA when using Grand Rapids altimeter setting.

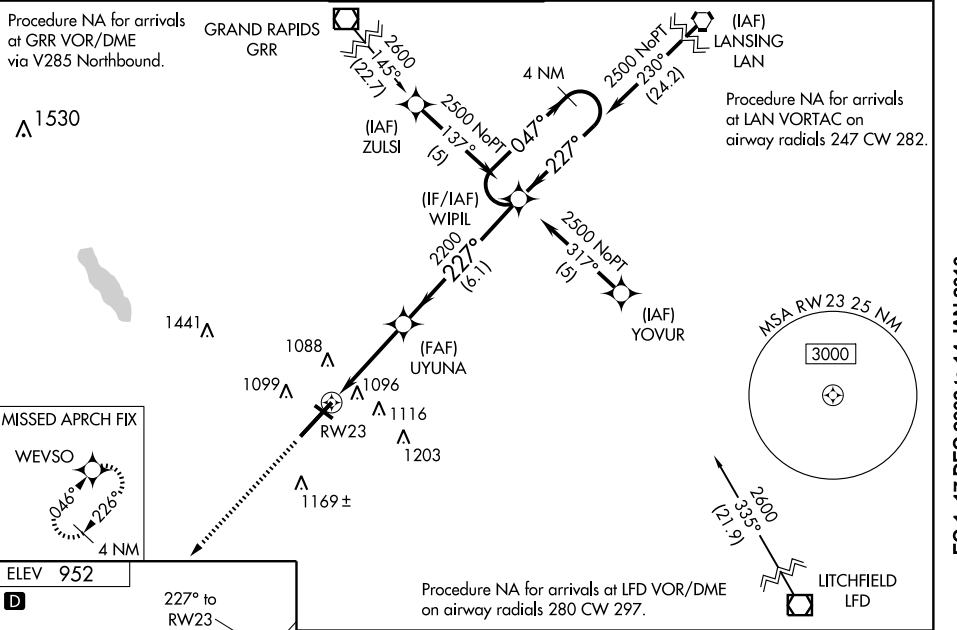
MALSR

AS

⋮

MISSED APPROACH:
Climb to 2500 direct
WEVSO and hold.

ATIS 128.325	KALAMAZOO APP CON ★ 119.2 340.9	BATTLE CREEK TOWER ★ 126.825 239.025	GND CON 121.7 256.875	UNICOM 122.95	CTAF 126.825 0
-----------------	------------------------------------	---	--------------------------	------------------	-------------------



CATEGORY	A		B		C	D
	LPV DA		1210/24		281 (300-½)	
	LNAV/VNAV DA		1419/60		490 (500-1 ¼)	
	LNAV MDA		1360/24	431 (500- ½)	1360/40 431 (500-¾)	1360/50 431 (500-1)
	CIRCLING		1400-1 448 (500-1)	1500-1 548 (600-1)	1500-1½ 548 (600-1½)	1520-2 568 (600-2)

WEVSO

2500

* LNAV only

4 NM Holding Pattern

WIPIL

047°

2500

227°

2200

UYUNA

* 1.2 NM to RW23

1.2

2.6 NM

6.1 NM

GS 3.00° TCH 49

HIRL Rwy 5-23 0

MIRL Rwy 13-31 0

REIL Rwy 5, 13 and 31 0

VORTAC BTL	APP CRS	Rwy Idg	4835
109.4	300°	TDZE	930
Chan 31		Apt Elev	952

VOR or TACAN or GPS RWY 31

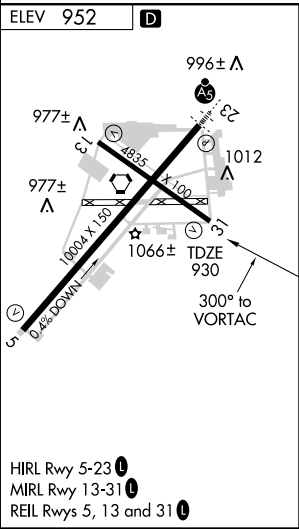
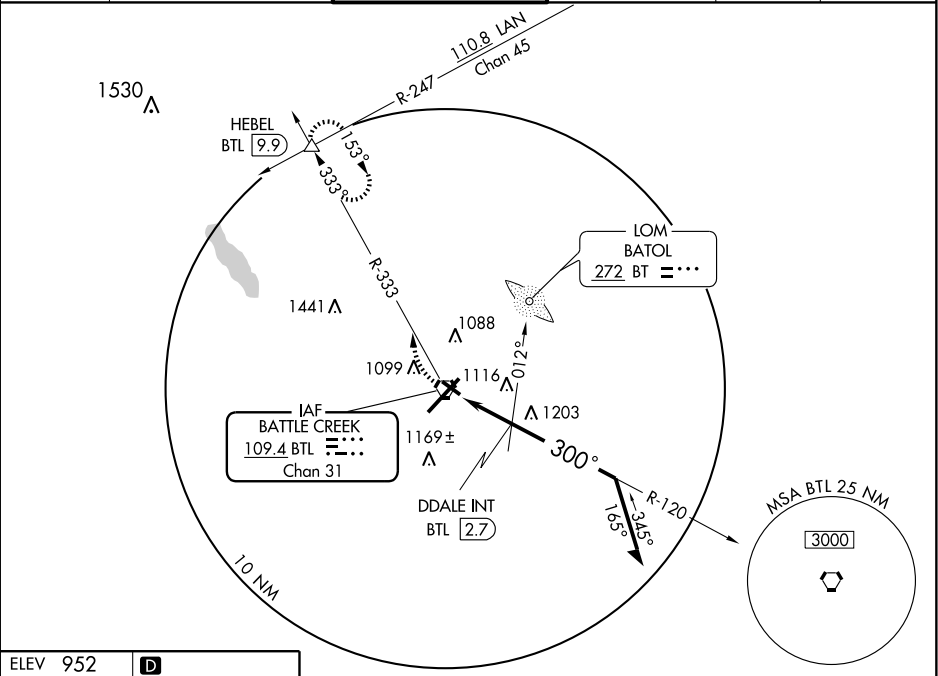
BATTLE CREEK / W.K. KELLOGG (BTL)

When control tower closed, except for operators with approved weather reporting service, use Grand Rapids altimeter setting and increase all MDAs 160 feet and all visibilities ¾ mile.

ASR Air carrier landing visibility reduction for local conditions not authorized.

MISSED APPROACH: Climbing right turn to 3000 via BTL R-333 to HEBEL Int/BTL 9.9 DME and hold.

ATIS	KALAMAZOO APP CON	BATTLE CREEK TOWER	GND CON	UNICOM	CTAF
128.325	119.2 340.9	126.825 239.025	121.7 256.875	122.95	126.825



3000 HEBEL BTL R-333 109.4		VORTAC		Remain within 10 NM	
		DDALE INT BTL 2.7		2500	
1680 when using Grand Rapids altimeter setting.		1520		2.1 NM	
		0.6			
CATEGORY	A	B	C	D	
S-31	1520-1	590 (600-1)	1520-1½ 590 (600-1½)	1520-1¾ 590 (600-1¾)	
CIRCLING	1520-1	568 (600-1)	1520-1½ 568 (600-1½)	1520-2 568 (600-2)	
DDALE MINIMUMS					
S-31	1380-1	450 (500-1)	1380-1¼ 450 (500-1¼)	1380-1½ 450 (500-1½)	
CIRCLING	1420-1 468 (500-1)	1440-1 488 (500-1)	1480-1½ 528 (600-1½)	1520-2 568 (600-2)	

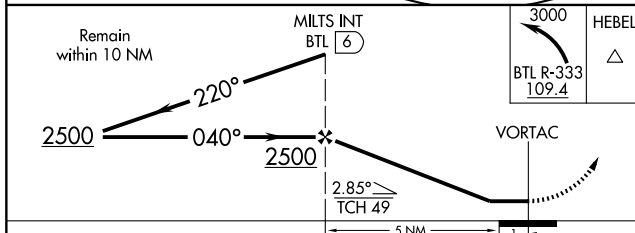
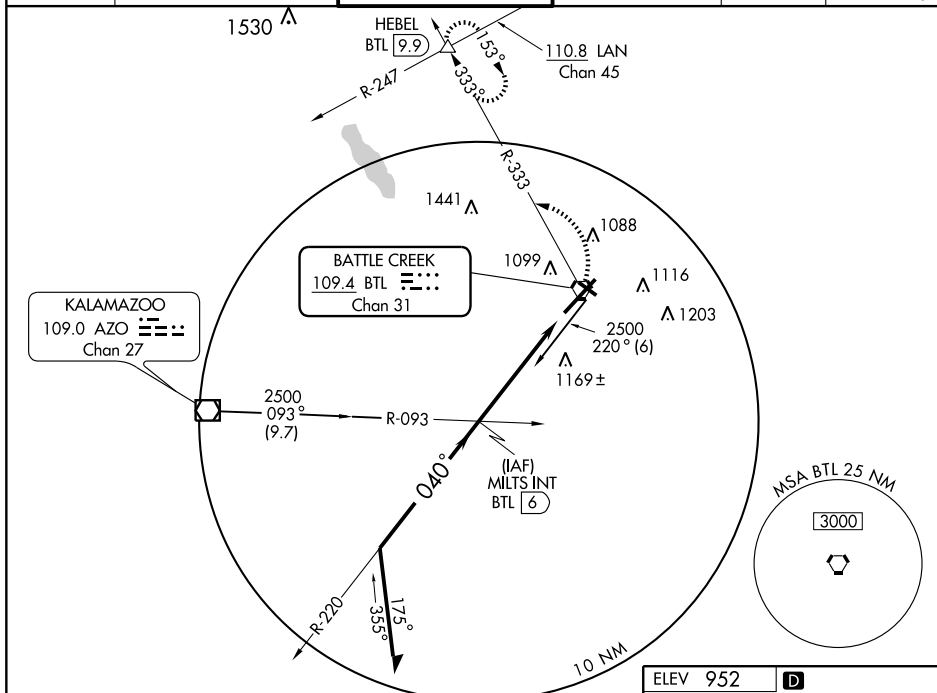
VORTAC BTL 109.4 Chan 31	APP CRS 040°	Rwy Idg 10003 TDZE 952 Apt Elev 952
--	------------------------	--

VOR or TACAN RWY 5
BATTLE CREEK / W.K. KELLOGG (BTL)

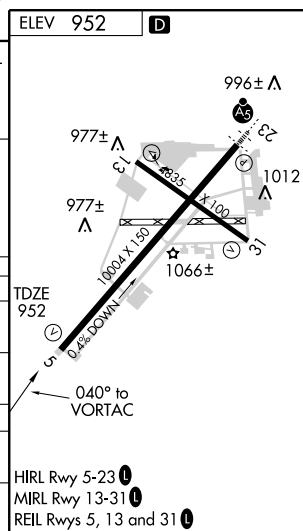
T	When control tower closed, except for
A	operators with approved weather reporting
ASR	service, use Grand Rapids altimeter setting.

MISSED APPROACH: Climbing left turn to 3000 via BTL R-333 to HEBEL Int/BTL 9.9 DME and hold.

ATIS 128.325	KALAMAZOO APP CON ★ 119.2 340.9	BATTLE CREEK TOWER ★ 126.825 239.025	GND CON 121.7 256.875	UNICOM 122.95	CTAF 126.825
-----------------	------------------------------------	---	--------------------------	------------------	-----------------



CATEGORY	A	B	C	D
S-5	1400-1	448 (500-1)	1400-1 $\frac{1}{4}$ 448 (500-1 $\frac{1}{4}$)	1400-1 $\frac{1}{2}$ 448 (500-1 $\frac{1}{2}$)
CIRCLING	1420-1 468 (500-1)	1440-1 488 (500-1)	1480-1 $\frac{1}{2}$ 528 (600-1 $\frac{1}{2}$)	1520-2 568 (600-2)
GRAND RAPIDS ALTIMETER SETTING MINIMUMS				
S-5	1560-1	608 (700-1)	1560-1 $\frac{3}{4}$ 608 (700-1 $\frac{3}{4}$)	1560-2 608 (700-2)
CIRCLING	1580-1 628 (700-1)	1600-1 648 (700-1)	1640-2 688 (700-2)	1680-2 $\frac{1}{4}$ 728 (800-2 $\frac{1}{4}$)



VOR RWY 23

BATTLE CREEK / W.K. KELLOGG (BTL)

VORTAC BTL	APP CRS	Rwy Idg	10003
109.4	231°	TDZE	929
Chan 31		Apt Elev	952

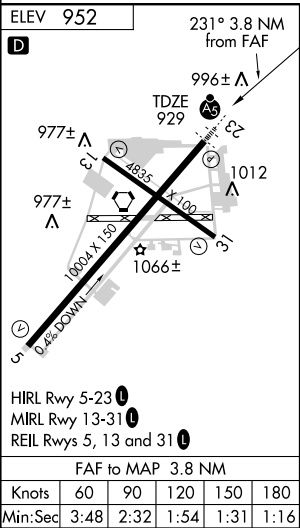
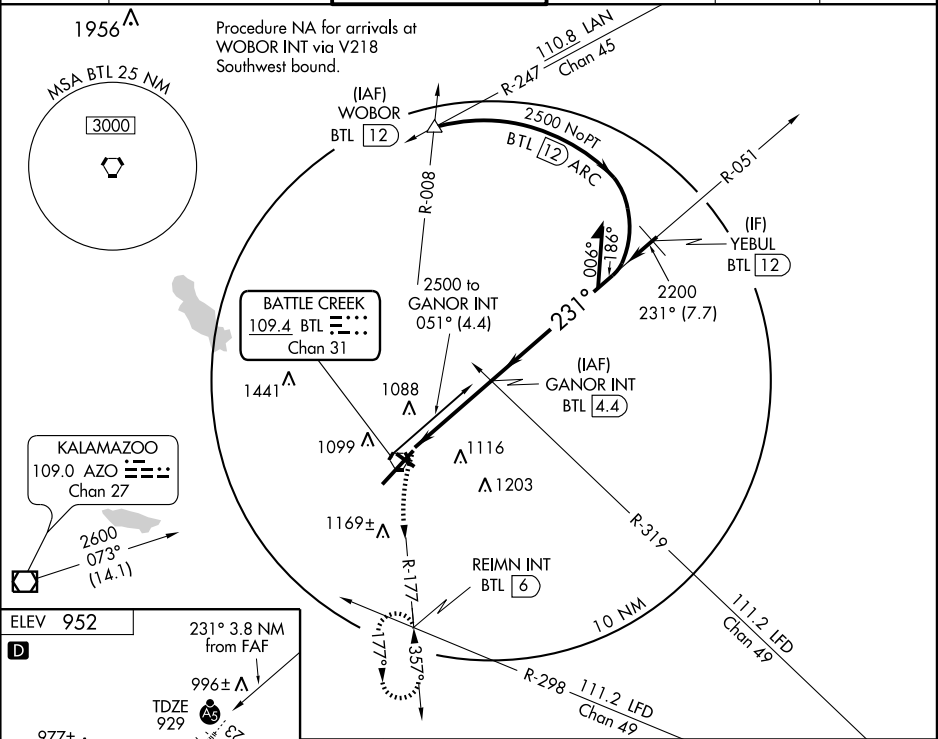
For inoperative MALS, increase S-23 Cats A/B visibility to RVR 5000. Visibility reduction by helicopters NA. When local altimeter setting not received, use Grand Rapids altimeter setting and increase all MDA 120 feet, increase Cat C visibility to RVR 5000, Cat D visibility to RVR 6000, and Circling Cat C and D visibility ¼ mile. VDP NA when using Grand Rapids altimeter setting.

MALS



MISSED APPROACH:
Climbing left turn to 3000
via BTL VORTAC R-177
to REIMN INT/6 DME and hold,
continue climb-in-hold to 3000.

ATIS	KALAMAZOO APP CON	BATTLE CREEK TOWER	GND CON	UNICOM	CTAF
128.325	119.2 340.9	126.825 239.025	121.7 256.875	122.95	126.825



<div>3000</div> <div>BTL R-177</div> <div>109.4</div>		<div>REIMN</div> <div>INT</div>		<div>GANOR INT</div> <div>BTL 4.4</div>		<div>Remain</div> <div>within 10 NM</div>	
<div>BTL 0.6</div>		<div>BTL 2</div>		<div>051°</div>		<div>2500</div>	
<div>1.3</div>		<div>2.4 NM</div>		<div>231°</div>		<div>2200</div>	
<div>3.07°</div>		<div>TCH 49</div>		<div>×</div>			
CATEGORY		A		B		C	
S-23		1400/40 471 (500-¾)				1400/50 471 (500-1)	
CIRCLING		1420-1 468 (500-1)		1500-1 548 (600-1)		1500-1½ 548 (600-1½)	
						1520-2 568 (600-2)	

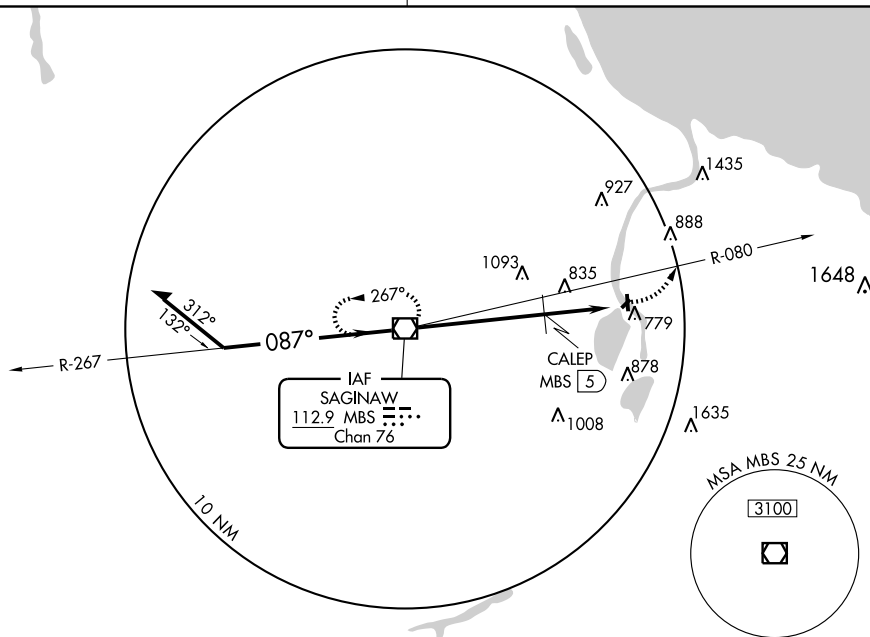
VOR/DME MBS 112.9 Chan 76	APP CRS 087°	Rwy Idg TDZE Apt Elev N/A 586
---	------------------------	---

- ▼ Use Saginaw altimeter setting.
 ▲ NA Circling not authorized southeast of Rwy 23 and 36.

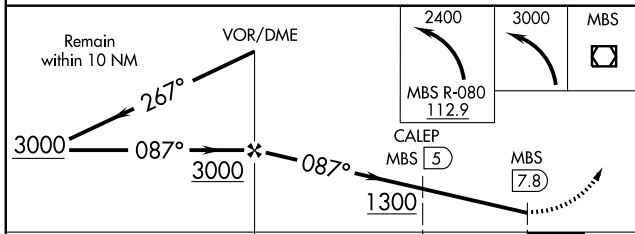
MISSED APPROACH: Climbing left turn to 2400
 via MBS R-080 outbound then climbing left turn
 to 3000 direct MBS VOR/DME and hold.

SAGINAW APP CON ★
120.95 235.625

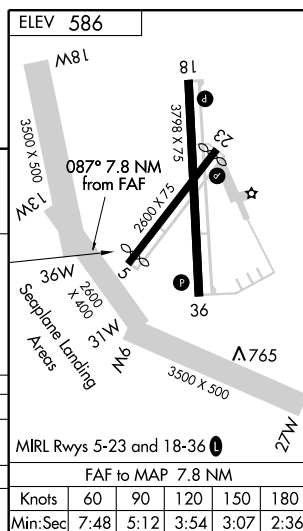
UNICOM
122.8 (CTAF) **0**



CAUTION: Tall vessels may be in the approach areas to Rwy 5 and 36.



CATEGORY	A	B	C	D
CIRCLING	1300-1	714 (800-1)	1300-2 714 (800-2)	NA
DME MINIMUMS				
CIRCLING	1120-1 534 (600-1)	1180-1 594 (600-1)	1180-1½ 594 (600-1½)	NA



NDB SJX
382

APP CRS
280°

Rwy Idg	4300
TDZE	669
Apt Elev	669

NDB RWY 27
BEAVER ISLAND (SJX)

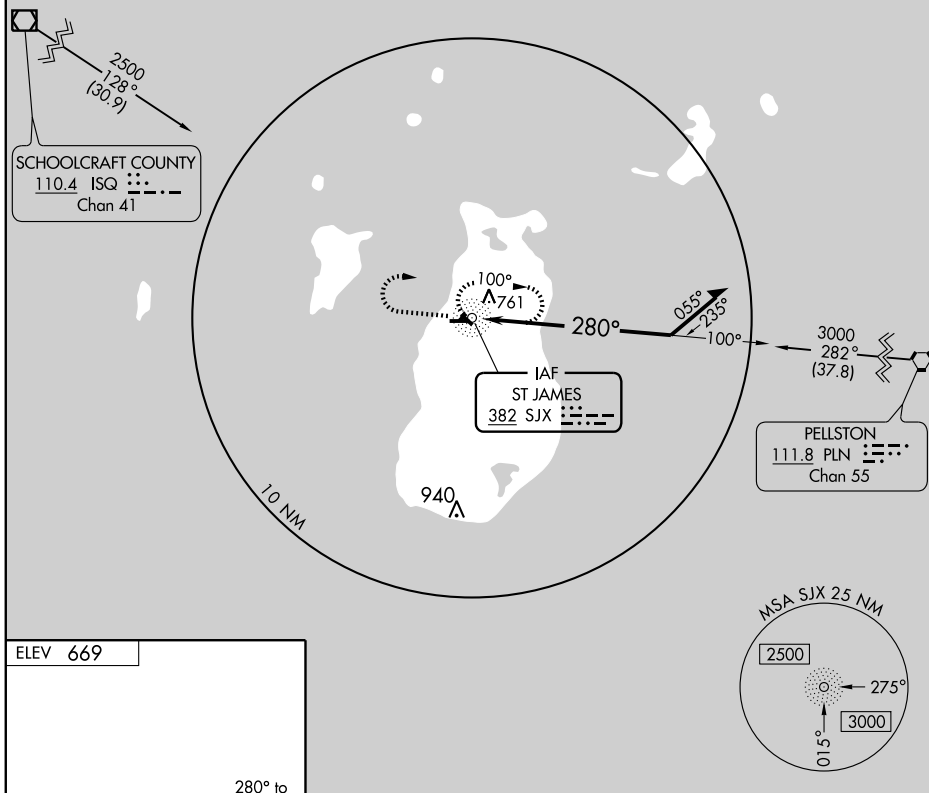


When local altimeter setting not received, use Pellston altimeter setting and increase all MDA 100 feet.

MISSED APPROACH: Climb to 2400 then right turn direct SJX NDB and hold.

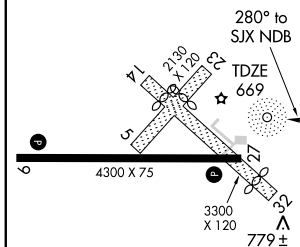
AWOS-3
118.075

MINNEAPOLIS CENTER
134.6 354.05

UNICOM
122.8 (CTAF) **L**

EC-1. 17 DEC 2009 to 14 JAN 2010

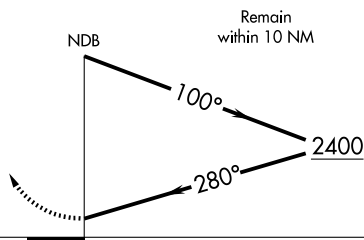
ELEV 669



2400



SJX
382



Remain
within 10 NM

MIRL Rwy 9-27 **L**
REIL Rwy 9 and 27 **L**

CATEGORY	A	B	C	D
S-27	1140-1	471 (500-1)		NA
CIRCLING	1140-1	471 (500-1)		NA

WAAS CH 56301 W02A	APP CRS 022°	Rwy Idg TDZE Apt Elev	5000 623 623
--	------------------------	-----------------------------	---

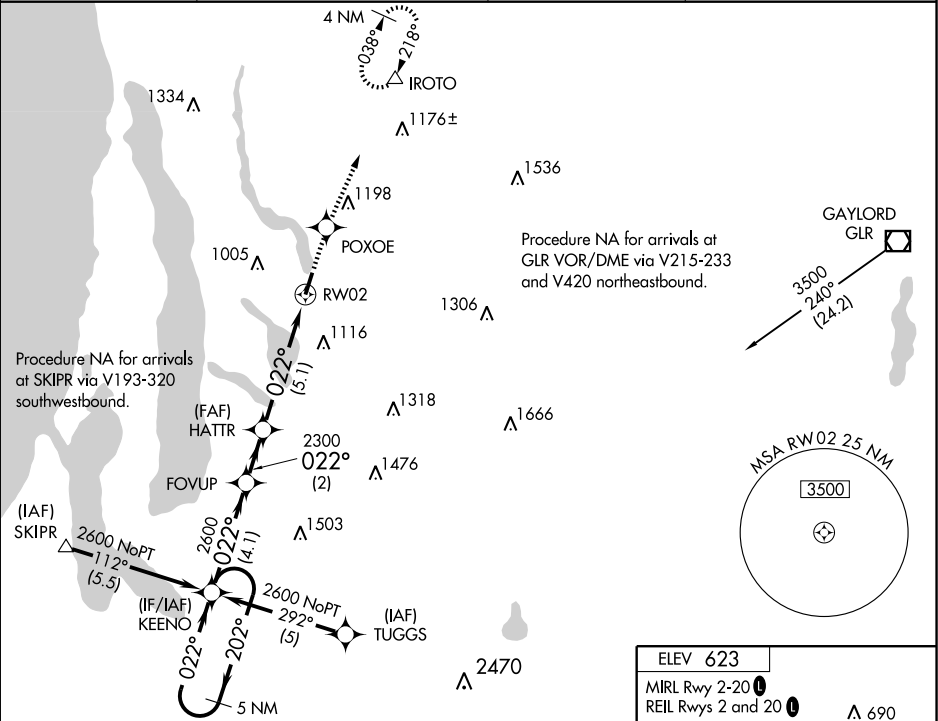
RNAV (GPS) RWY 2
BELLAIRE / ANTRIM COUNTY (ACB)

▼ If local altimeter setting not received, use Cherry Capital altimeter setting and increase all DAs/MDAs 60 feet. VDP NA when using Cherry Capital altimeter setting. DME/DME RNP-0.3 NA.

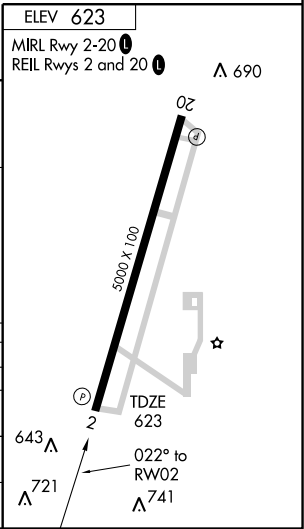
▲

MISSED APPROACH: Climb to 3000 direct POXOE and via 030° track to IROTO and hold.

AWOS-3 119.275	MINNEAPOLIS CENTER 132.9 338.3	GCO 121.725	UNICOM 122.7 (CTAF) 0
--------------------------	--	-----------------------	--



5 NM Holding Pattern				
2600 ← 202° / 022° →				
GS 3.00° TCH 43				
4.1 NM 2 NM 3.4 NM 1.7 NM				
CATEGORY	A	B	C	D
LPV DA	908-1 285 (300-1)			
RNAV/VNAV DA	NA			
RNAV MDA	1220-1 597 (600-1)		1220-1½ 597 (600-1¾)	1220-1¾ 597 (600-1¾)
CIRCLING	1260-1 637 (700-1)	1340-1 717 (800-1)	1360-2 737 (800-2)	1440-2¾ 817 (900-2¾)



VOR RWY 2

BELLAIRE / ANTRIM COUNTY (ACB)

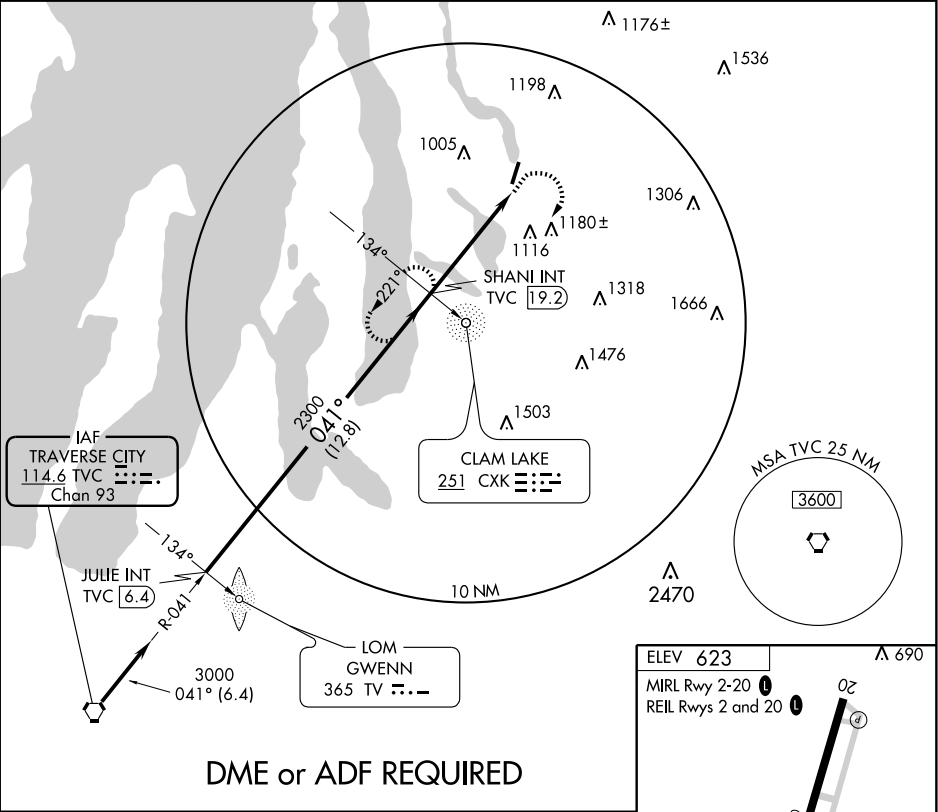
VORTAC TVC 114.6 Chan 93	APP CRS 041°	Rwy Idg TDZE Apt Elev	5000 623 623
--	------------------------	-----------------------------	---

▼

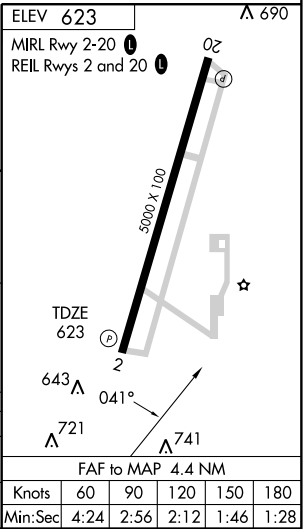
▲

MISSED APPROACH: Climbing right turn to 2700 via TVC R-041 to SHANI Int/19.2 DME and hold.

AWOS-3 119.275	MINNEAPOLIS CENTER 132.9 338.3	GCO 121.725	UNICOM 122.7 (CTAF) 0
--------------------------	--	-----------------------	--



<p>JULIE INT TVC 6.4</p> <p>3000</p> <p>Procedure Turn NA</p>		<p>SHANI INT TVC 19.2</p> <p>2300</p> <p>3.16° TCH 42</p>		<p>2700</p> <p>TVC R-041 114.6</p> <p>SHANI INT</p>	
<p>12.8 NM</p>		<p>4.4 NM</p>		<p>0.5 NM</p>	
CATEGORY	A		B	C	D
S-2	1540-1¼ 917 (1000-1¼)			1540-2¾ 917 (1000-2¾)	1540-3 917 (1000-3)
CIRCLING	1540-1¼ 917 (1000-1¼)			1540-2¾ 917 (1000-2¾)	1540-3 917 (1000-3)



ILS RWY 27

BENTON HARBOR/SOUTHWEST MICHIGAN RGNL (BEH)

LOC I-BEH	APP CRS	Rwy Idg	4536
108.5	273°	TDZE	637
		Apt Elev	643

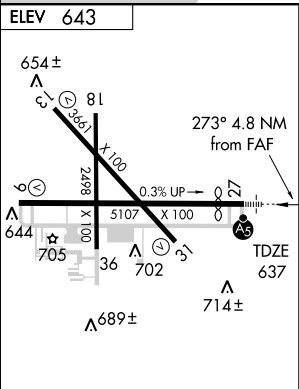
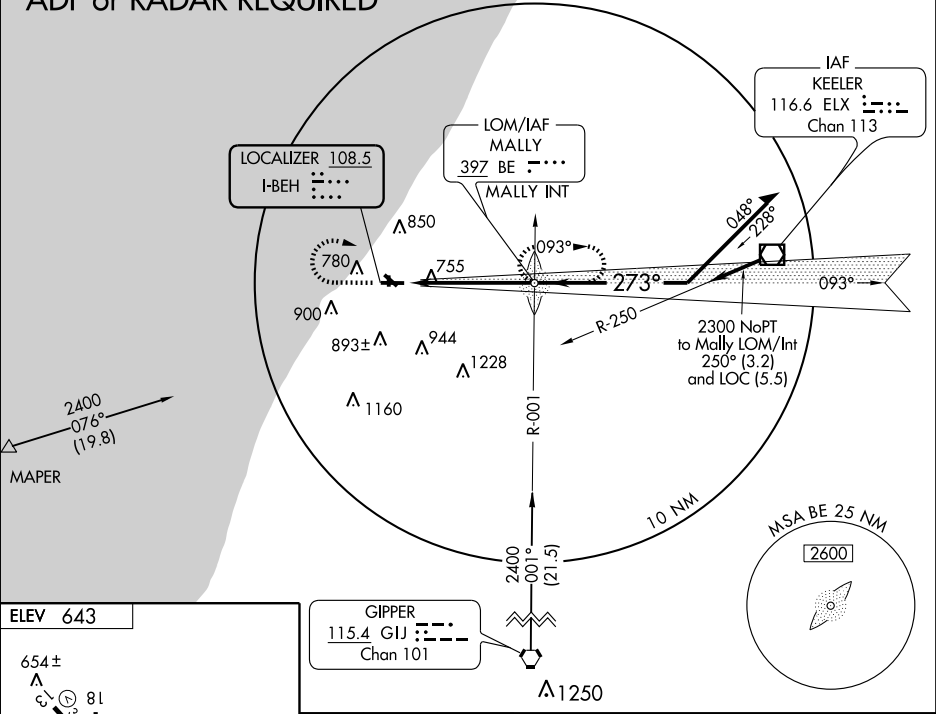
LOC unusable beyond 20° left of course.
Cats A and B S-LOC 27 visibility increased ¼ mile for inoperative MALSR.
S-ILS 27 inoperative table does not apply.

MALSR

MISSED APPROACH: Climb to 2400, then right turn direct MALLY LOM and hold.

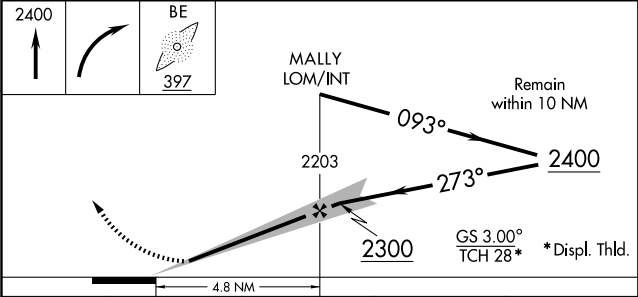
ASOS	SOUTH BEND APP CON*	SOUTH BEND CLNC DEL	UNICOM
121.55	118.55 257.8	119.7	123.0 (CTAF) 1

ADF or RADAR REQUIRED



REIL Rwy 9, 13 and 31
MIRL Rwy 13-31 and 18-36
HIRL Rwy 9-27

FAF to MAP 4.8 NM					
Knots	60	90	120	150	180
Min:Sec	4:48	3:12	2:24	1:55	1:36



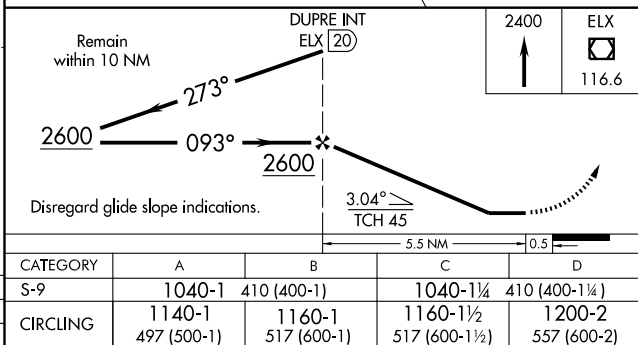
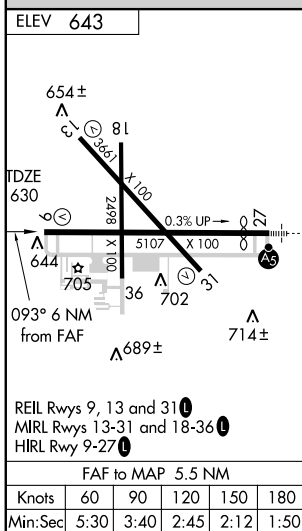
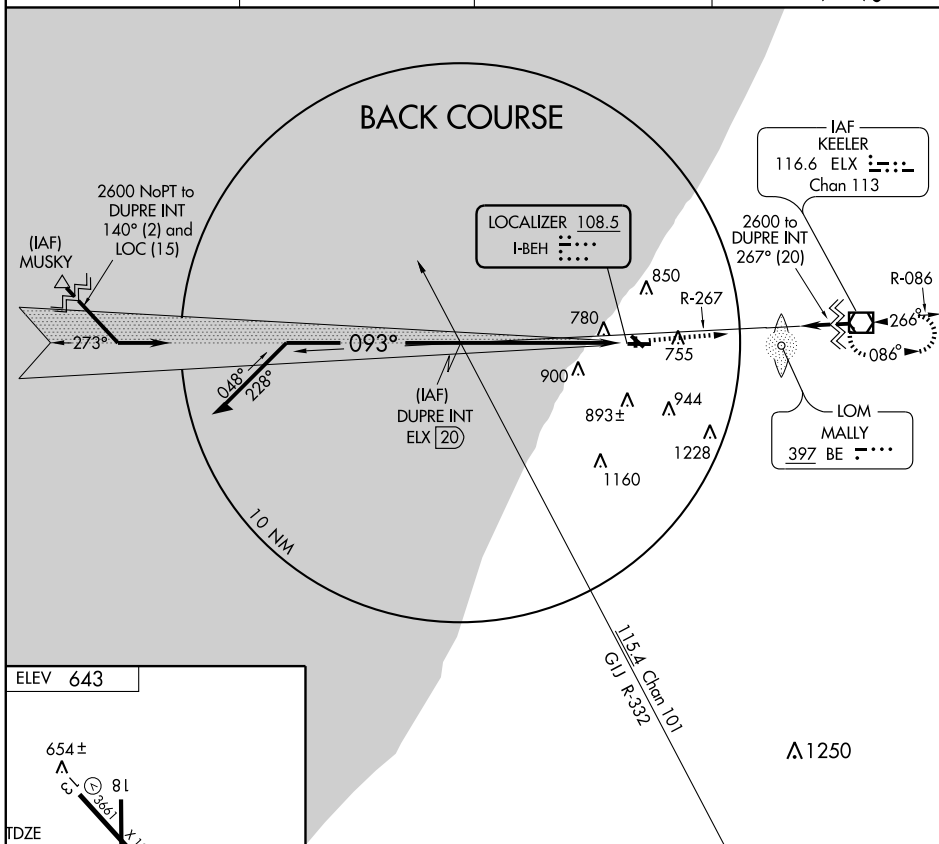
CATEGORY	A	B	C	D
S-ILS 27	887-¾ 250 (300-¾)			
S-LOC 27	1140-¾ 503 (500-¾)	1140-1 503 (500-1)	1160-1½ 1200-2	1160-1½ 1200-2
CIRCLING	1140-1 497 (500-1)	1160-1 517 (600-1)	1160-1½ 517 (600-1½)	1200-2 557 (600-2)

LOC I-BEH 108.5	APP CRS 093°	Rwy Idg TDZE Apt Elev	5107 630 643
---------------------------	------------------------	-----------------------------	---

LOC BC RWY 9

BENTON HARBOR/ SOUTHWEST MICHIGAN RGNL (BEH)

NA		MISSED APPROACH: Climb to 2400 direct ELX VOR/DME and hold.	
ASOS 121.55	SOUTH BEND APP CON★ 118.55 257.8	SOUTH BEND CLNC DEL 119.7	UNICOM 123.0 (CTAF) 0



WAAS CH 86912 W09A	APP CRS 093°	Rwy Idg 5107 TDZE 630 Apt Elev 643
--	------------------------	---

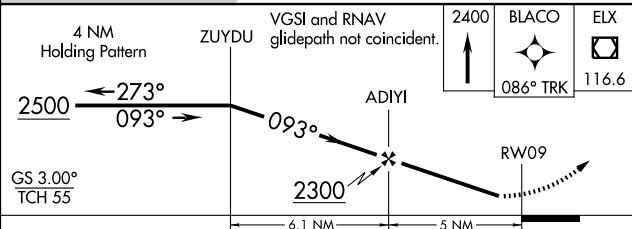
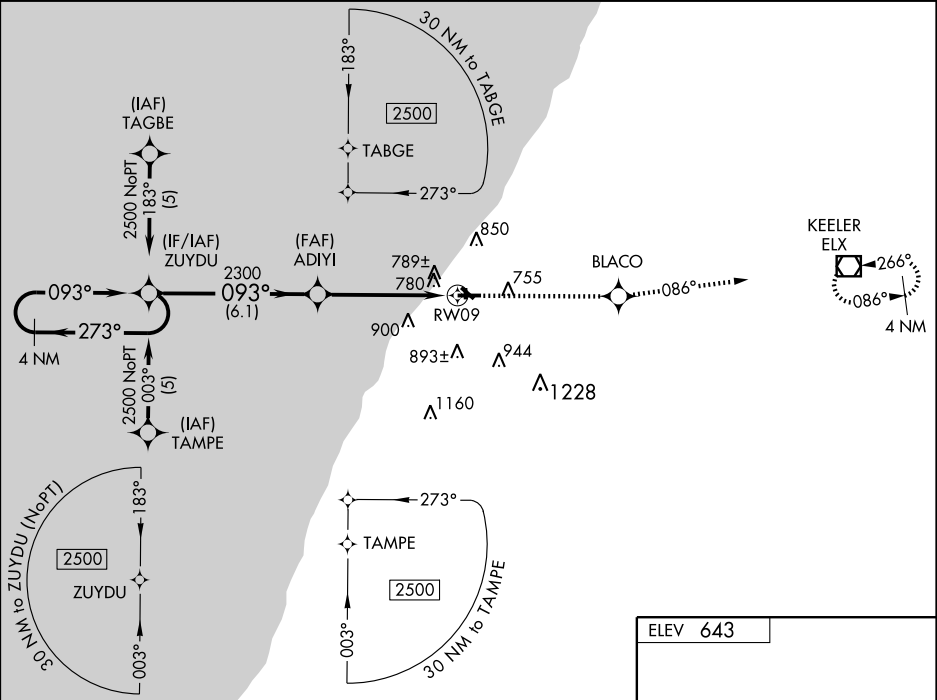
RNAV (GPS) RWY 9

BENTON HARBOR/SOUTHWEST MICHIGAN RGNL (BEH)

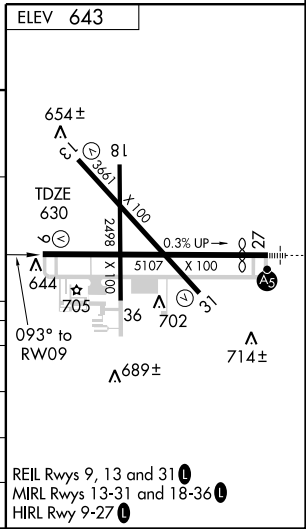
⚠ Baro-VNAV NA when using South Haven altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F).
⚠ DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use South Haven altimeter setting and increase all DA/MDA 40 feet and LVP all Cats visibility ¼ mile and LNAV Cat D visibility ½ mile.

MISSED APPROACH: Climb to 2400 direct BLACO and via 086° track to ELX VOR/DME and hold.

ASOS 121.55	SOUTH BEND APP CON★ 118.55 257.8	SOUTH BEND CLNC DEL 119.7	UNICOM 123.0 (CTAF) 0
-----------------------	--	-------------------------------------	---------------------------------



CATEGORY	A	B	C	D
LPV DA	1019-1¼	389 (400-1¼)		
LNAV/VNAV DA	1101-1¾	471 (500-1¾)		
LNAV MDA	1040-1	410 (500-1)	1040-1¼	410 (500-1¼)
CIRCLING	1120-1	477 (500-1)	1160-1½ 517 (600-1½)	1200-2 557 (600-2)



VOR/DME ELX
116.6
Chan **113**

APP CRS
086°

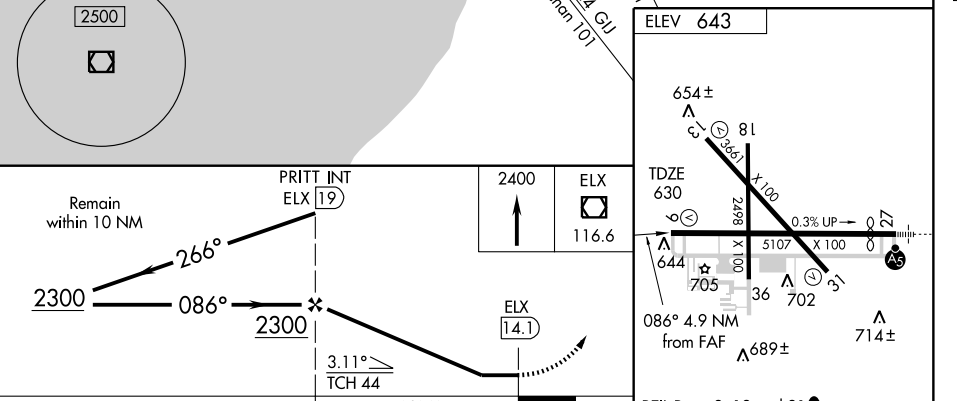
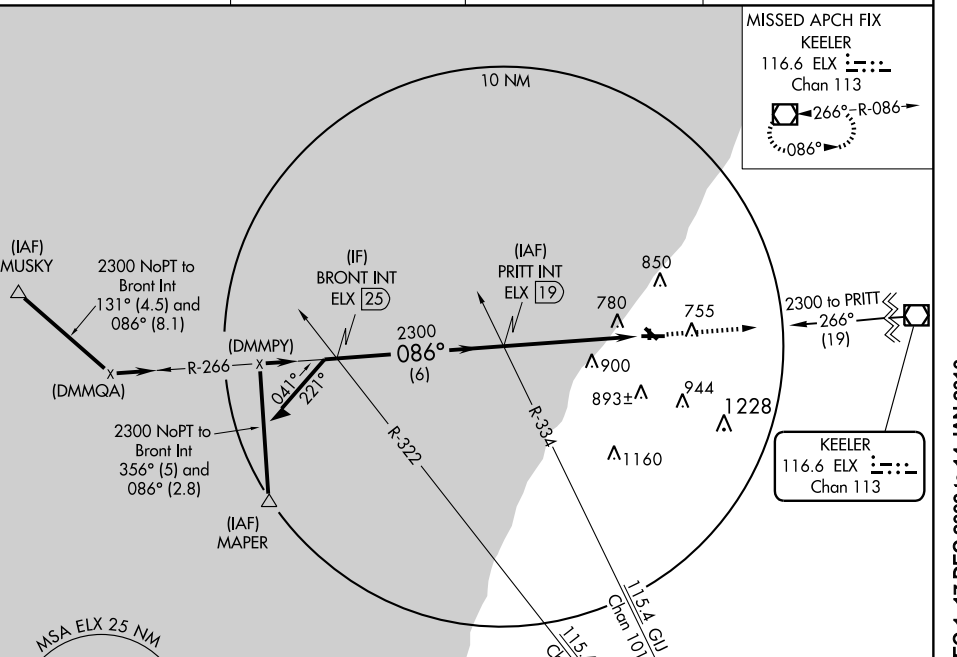
Rwy Idg **5107**
TDZE **630**
Apt Elev **643**

BENTON HARBOR/SOUTHWEST MICHIGAN RGNL (BEH)

Visibility reduction by helicopters NA. When local altimeter setting not received, use South Haven altimeter setting and increase all MDA 40 feet.

MISSED APPROACH: Climb to 2400 direct ELX VOR/DME and hold.

ASOS 121.55	SOUTH BEND APP CON★ 118.55 257.8	SOUTH BEND CLNC DEL 119.7	UNICOM 123.0 (CTAF) 0
-----------------------	--	-------------------------------------	---------------------------------



CATEGORY	A	B	4.9 NM		REIL Rwys 9, 13 and 31 MIRL Rws 13-31 and 18-36 HIRL Rwy 9-27					
			C	D						
S-9	1160-1	530 (600-1)	1160-1½ 530 (600-1½)	1160-1¾ 530 (600-1¾)						
CIRCLING	1160-1	517 (600-1)	1160-1½ 517 (600-1½)	1200-2 557 (600-2)	FAF to MAP 4.9 NM					
					Knots	60	90	120	150	180
					Min:Sec	4:54	3:16	2:27	1:58	1:38

EC-1.17 DEC 2009 to 14 JAN 2010

VOR RWY 27

VOR/DME ELX	APP CRS	Rwy Idg	4536
116.6	266°	TDZE	637
Chan 113		Apt Elev	643

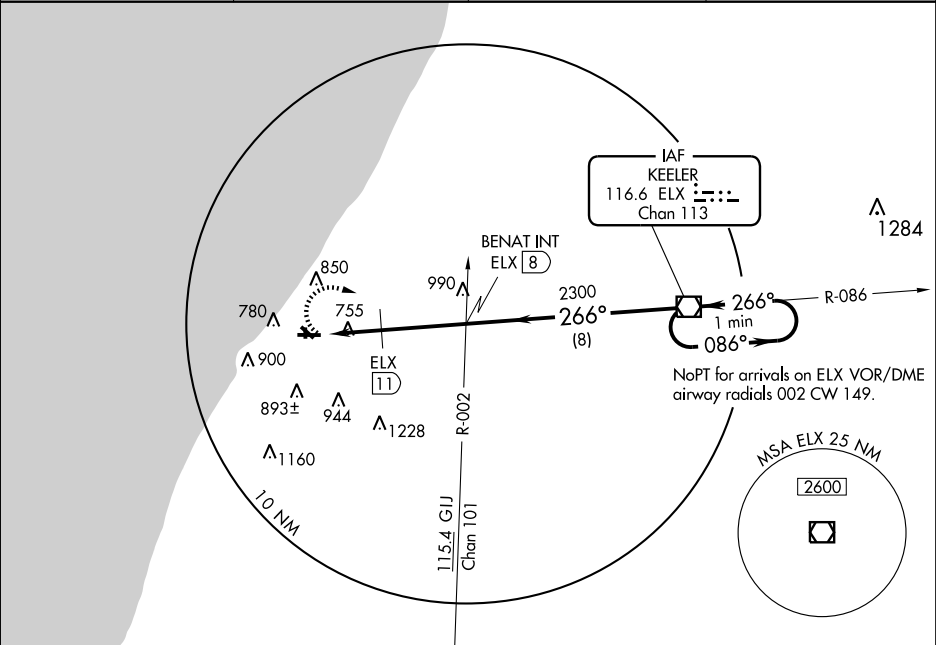
BENTON HARBOR/SOUTHWEST MICHIGAN RGNL (BEH)

⚠ Cats A and B S-27 visibility increased ¼ mile for inoperative MALSRS.

MALSRS

MISSED APPROACH: Climbing right turn to 2400 direct ELX VOR/DME and hold.

ASOS 121.55	SOUTH BEND APP CON ★ 118.55 257.8	SOUTH BEND CLNC DEL 119.7	UNICOM 123.0 (CTAF) 1
----------------	--------------------------------------	------------------------------	--------------------------



ELEV 643

REIL Rwy 9, 13 and 31 1
MIRL Rwy 13-31 and 18-36 1
HIRL Rwy 9-27 1

FAF to MAP 5.3 NM

Knots	60	90	120	150	180
Min:Sec	5:18	3:32	2:39	2:07	1:46

2400 ELX 116.6

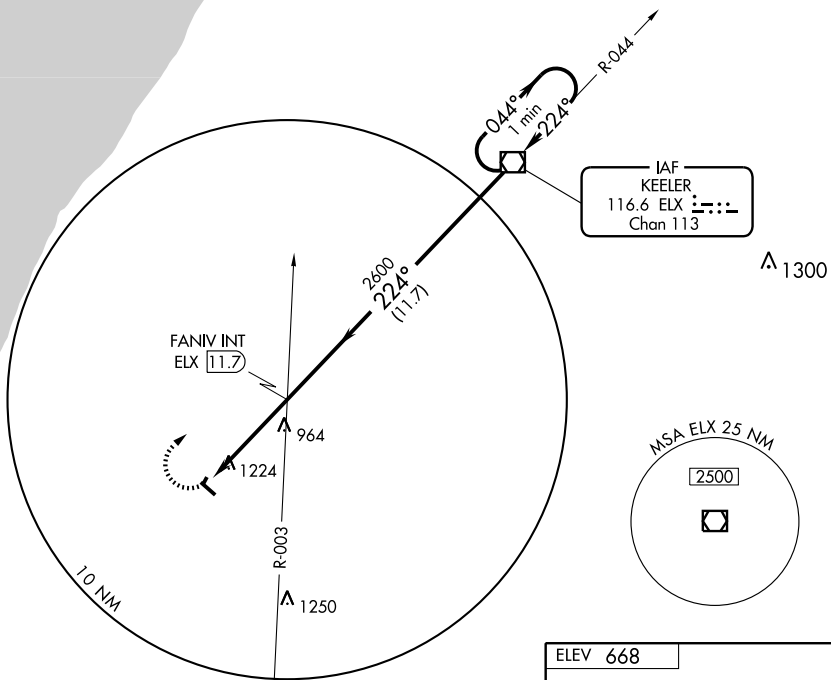
CATEGORY	A	B	C	D
S-27	1240-¾ 603 (600-¾)		1240-1¼ 603 (600-1¼)	1240-1½ 603 (600-1½)
CIRCLING	1240-1 597 (600-1)		1240-1¾ 597 (600-1¾)	1240-2 597 (600-2)

DME MINIMUMS

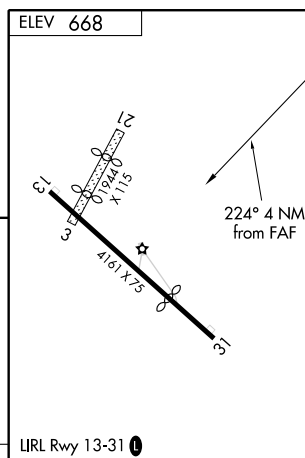
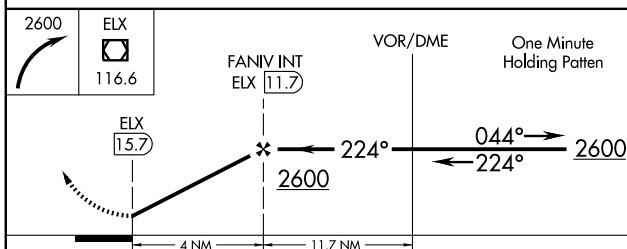
S-27	1120-¾ 483 (500-¾)		1120-1 483 (500-1)	
CIRCLING	1140-1 497 (500-1)	1160-1 517 (600-1)	1160-1½ 517 (600-1½)	1200-2 557 (600-2)

BERRIEN SPRINGS / ANDREWS UNIVERSITY AIRPARK (C20)

MISSED APPROACH: Climbing right turn to 2600 direct ELX VOR/DME and hold.

UNICOM
122.7 (CTAF) **L**

NoPT for Arrivals on ELX VOR/DME
Airway Radials 002 clockwise 094.



CATEGORY	A	B	C	D	FAF to MAP 4 NM					
CIRCLING	1620-1¼	1620-1½	NA		Knots	60	90	120	150	180
	952 [1000-1¼]	952 [1000-1½]			Min:Sec	4:00	2:40	2:00	1:36	1:20

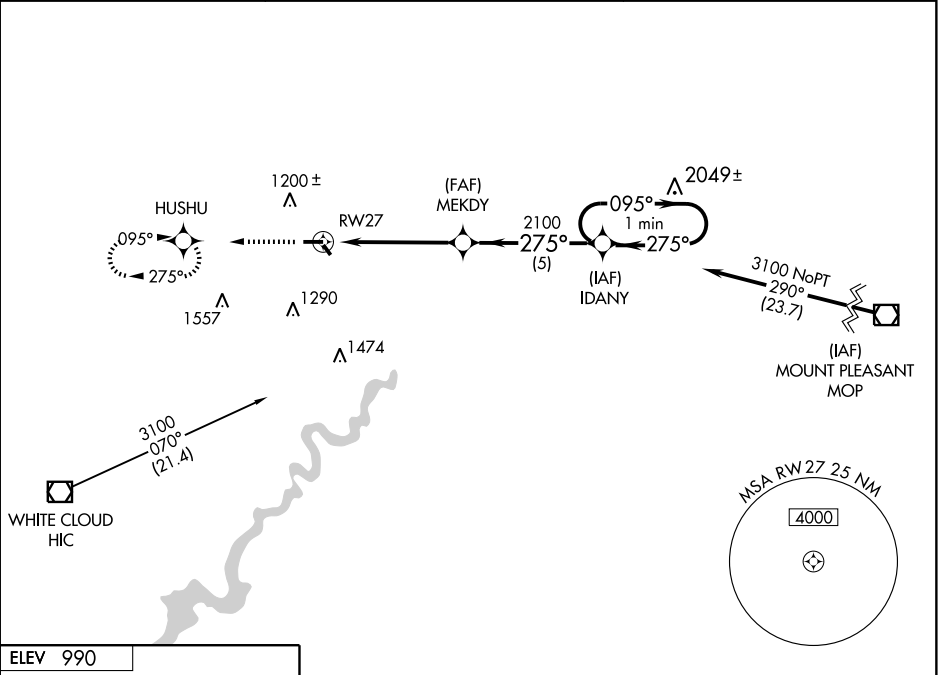
▽

NA

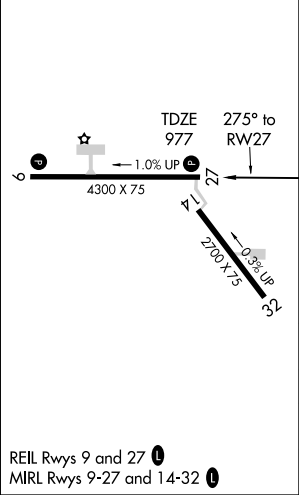
Obtain local altimeter setting on CTAF; when not received, use Muskegon altimeter setting.

MISSED APPROACH: Climb to 2900 direct HUSHU WP and hold.

AWOS-3 121.125	MINNEAPOLIS CENTER 120.85 322.35	UNICOM 122.8 (CTAF)
-------------------	-------------------------------------	------------------------



ELEV 990



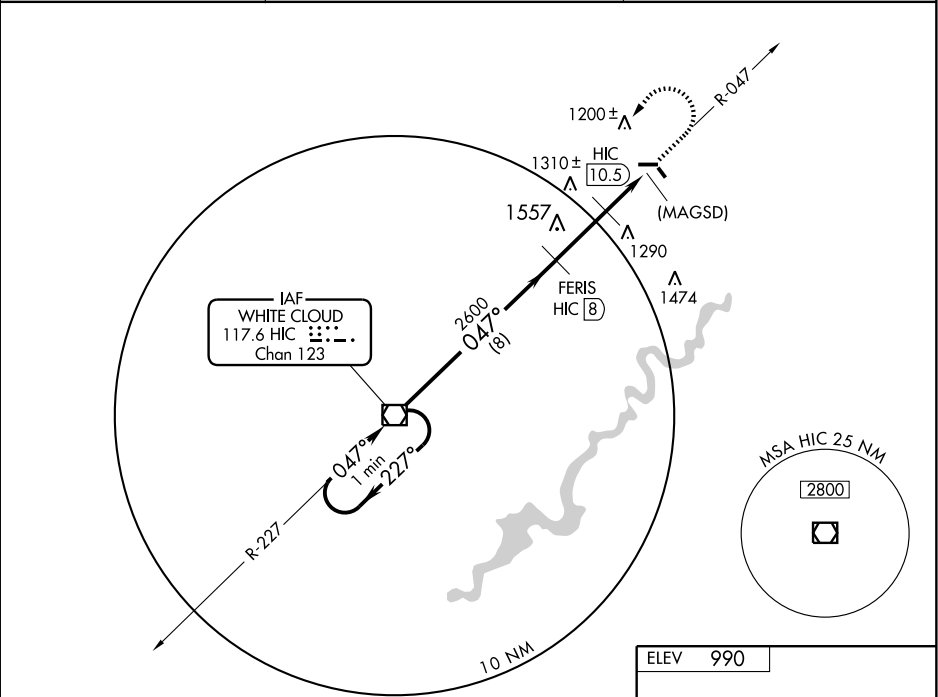
2900		One Minute Holding Pattern			
CATEGORY	A	B	C	D	
S-27	1460-1	483 (500-1)	1460-1¼ 483 (500-1¼)	1460-1½ 483 (500-1½)	
CIRCLING	1500-1	510 (600-1)	1540-1½ 550 (600-1½)	1600-2 610 (700-2)	
MUSKEGON ALTIMETER SETTING MINIMUMS					
S-27	1620-1	643 (700-1)	1620-1¾ 643 (700-1¾)	1620-2 643 (700-2)	
CIRCLING	1660-1	670 (700-1)	1700-2 710 (800-2)	1760-2½ 770 (800-2½)	

VOR/DME HIC	APP CRS	Rwy Idg	N/A
117.6	047°	TDZE	N/A
Chan 123		Apt Elev	990

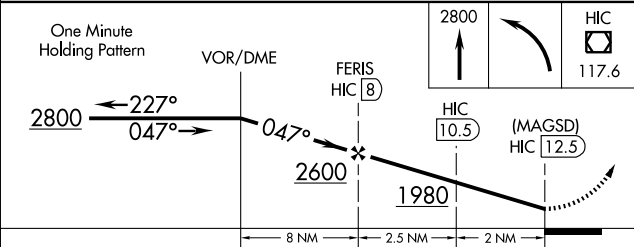
VOR/DME or GPS-A
BIG RAPIDS / ROBEN-HOOD (RQB)

Obtain local altimeter setting on CTAF; when not received, use Muskegon altimeter setting.	MISSED APPROACH: Climb to 2800, then left turn direct HIC VOR/DME and hold.
--	---

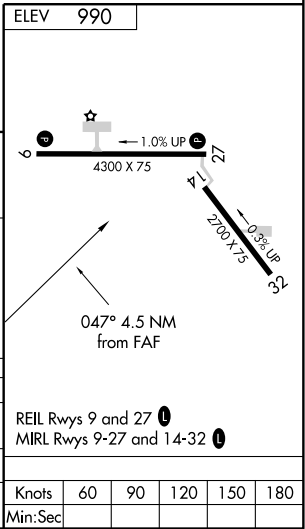
AWOS-3 121.125	MINNEAPOLIS CENTER 120.85 322.35	UNICOM 122.8 (CTAF)
-------------------	-------------------------------------	------------------------



NoPT for arrivals on HIC VOR/DME
airway radials 140 CW 303.



CATEGORY	A	B	C	D
CIRCLING	1540-1	550 (600-1)	1540-1½ 550 (600-1½)	1600-2 610 (700-2)
MUSKEGON ALTIMETER SETTING MINIMUMS				
CIRCLING	1700-1	710 (800-1)	1700-2 710 (800-2)	1760-2½ 770 (800-2½)



APP CRS	Rwy Idg	4887
175°	TDZE	707
	Apt Elev	719

RNAV (GPS) RWY 17

BOYNE FALLS/ BOYNE MOUNTAIN (BFA)

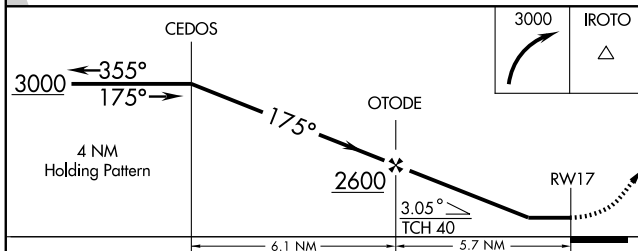
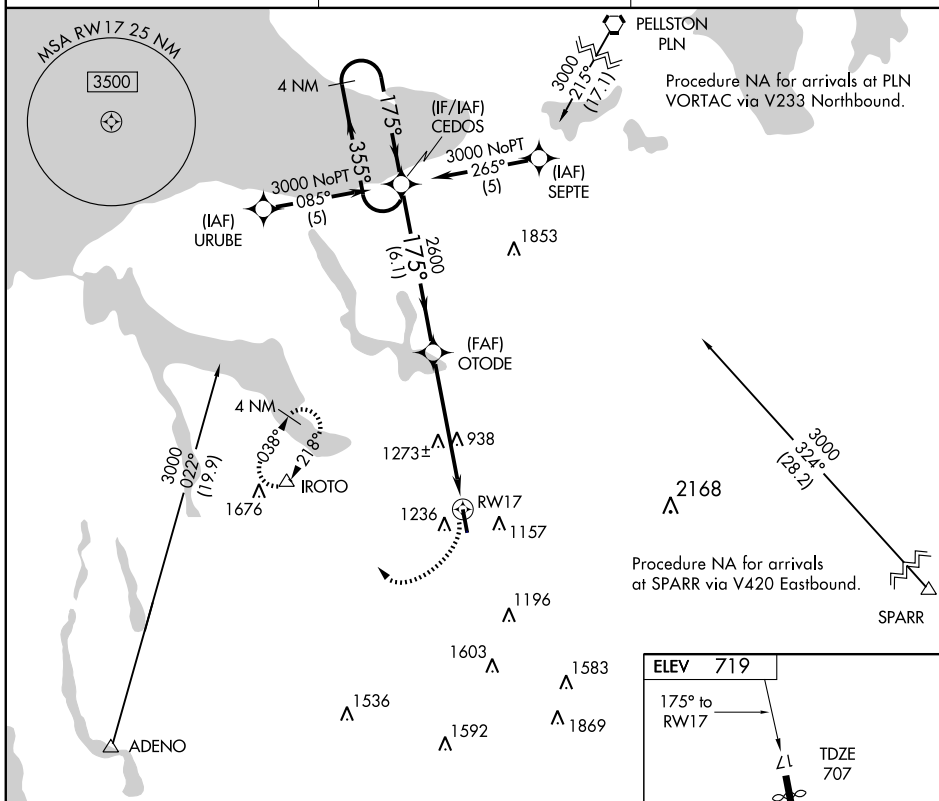
T Circling NA west of Rwy 17-35. DME/DME RNP-0.3 NA. Use Bellaire altimeter setting; when not received, use Pellston altimeter setting and increase all MDAs 20 feet and increase LNAV CATs A, C, and D visibility $\frac{1}{4}$ mile, and Circling CATs A and C $\frac{1}{4}$ mile.

MISSED APPROACH: Climbing right turn to 3000 direct IROTO and hold.

MINNEAPOLIS CENTER
134.6 354.05

UNICOM
122.8 (CTAF)

122.85 L



CATEGORY	A	B	C	D
INAV MDA	1580 - 1 873 (900-1)	1580 - 1¼ 873 (900-1¼)	1580 - 2½ 873 (900-2½)	1580 - 2¾ 873 (900-2¾)
CIRCLING	1580 - 1 861 (900-1)	1580 - 1¼ 861 (900-1¼)	1580 - 2½ 861 (900-2½)	1640 - 3 921 (1000-3)

APP CRS
355°

Rwy Idg
TDZE
Apt Elev

4687
719
719

RNAV (GPS) RWY 35

BOYNE FALLS/ BOYNE MOUNTAIN (BFA)

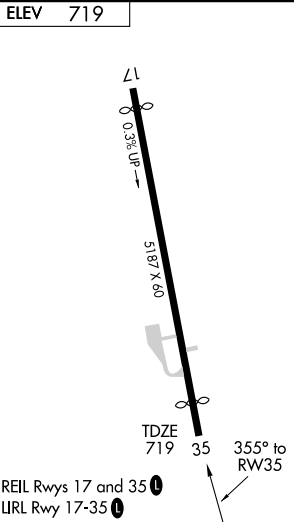
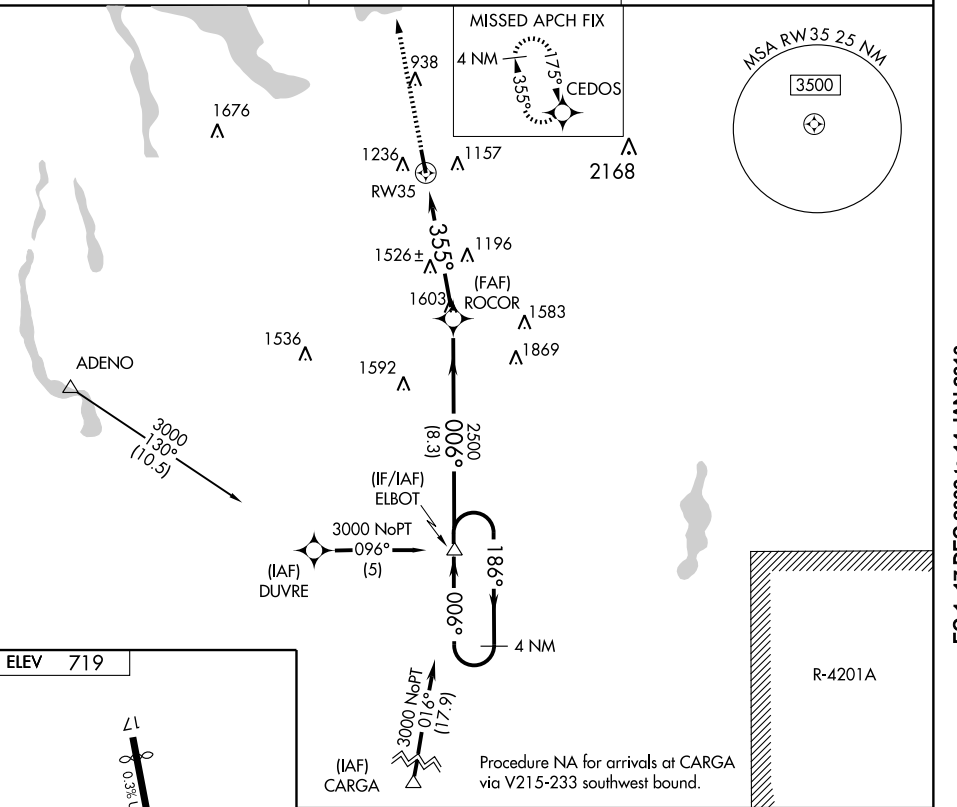
▼

△ NA

Circling NA west of Rwy 17-35. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. Use Bellair altimeter setting; when not received, use Pellston altimeter setting.

MISSED APPROACH: Climb to 3000 direct CEDOS and hold.

MINNEAPOLIS CENTER 134.6 354.05	UNICOM 122.8 (CTAF)	122.85
------------------------------------	------------------------	--------



	3000	CEDOS	ELBOT	186°	3000
			ROCOR	006°	006°
	RW35		2500		4 NM Holding Pattern
		5.4 NM	8.3 NM		
CATEGORY	A	B	C	D	
LNAV MDA	1840 - 1¼ 1121 (1200-1¼)	1840 - 1½ 1121 (1200-1½)	1840 - 3	1121 (1200-3)	
CIRCLING	1840 - 1¼ 1121 (1200-1¼)	1840 - 1½ 1121 (1200-1½)	1840 - 3	1121 (1200-3)	

EC-1.17 DEC 2009 to 14 JAN 2010

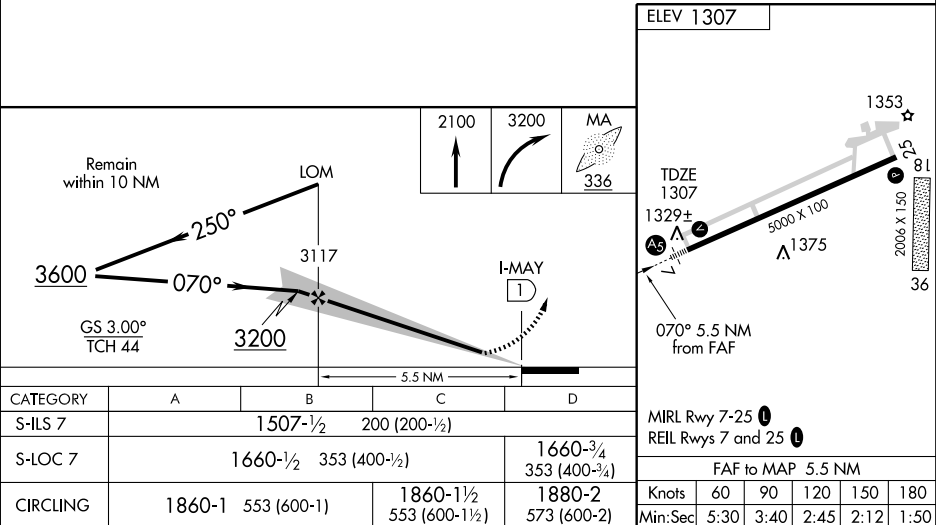
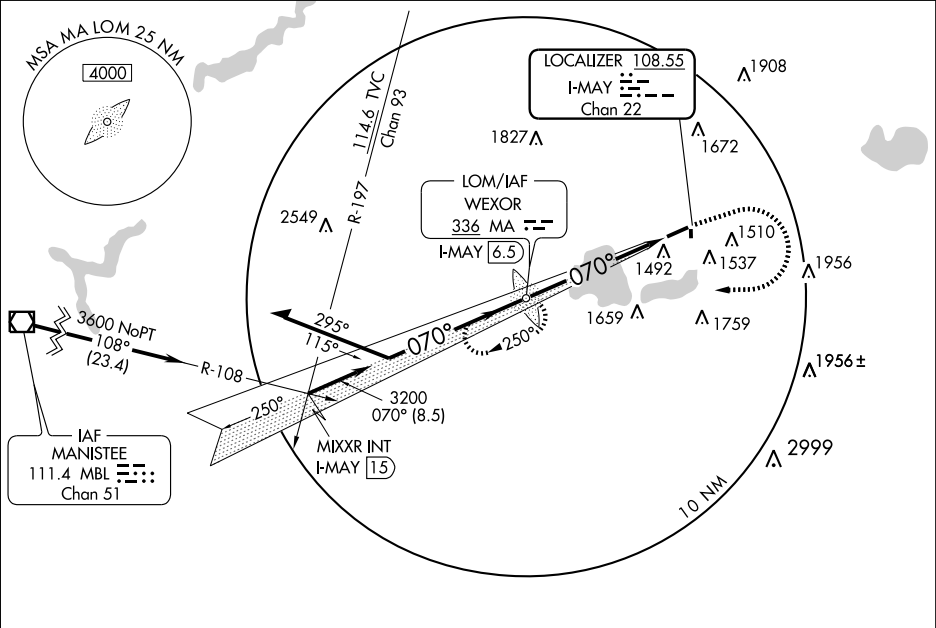
LOC/DME I-MAY	APP CRS	Rwy Idg	5000
108.55	070°	TDZE	1307
Chan 22		Apt Elev	1307

ILS or LOC RWY 7
CADILLAC / WEXFORD COUNTY (CAD)

ADF Required. When local altimeter setting not received, use Houghton Lake altimeter setting and increase all DA 137 feet and all MDA 140 feet and increase S-ILS 7 all Cats visibility ¼ mile, S-LOC 7 visibility Cats C and D ¼ mile, Circling visibility Cat C ½ mile and Cat D ¼ mile. For inoperative MALSR when using Houghton Lake altimeter setting increase S-ILS 7 all Cats visibility to ¼ mile.

MALSR MISSED APPROACH: Climb to 2100, then climbing right turn to 3200 direct WEXOR LOM I-MAY 6.5 DME and hold.

AWOS-3 128.325	MINNEAPOLIS CENTER 132.9 338.3	GCO 121.725	UNICOM 122.8 (CTAF) 0
-------------------	-----------------------------------	----------------	--------------------------



NDB RWY 7

CADILLAC / WEXFORD COUNTY (CAD)

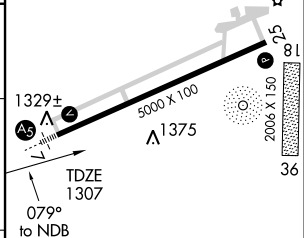
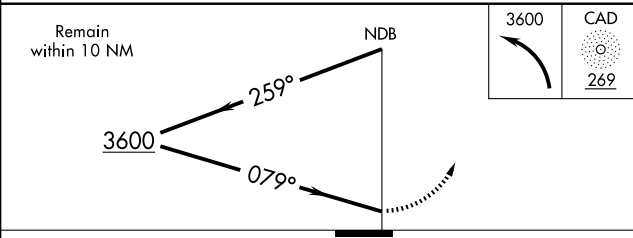
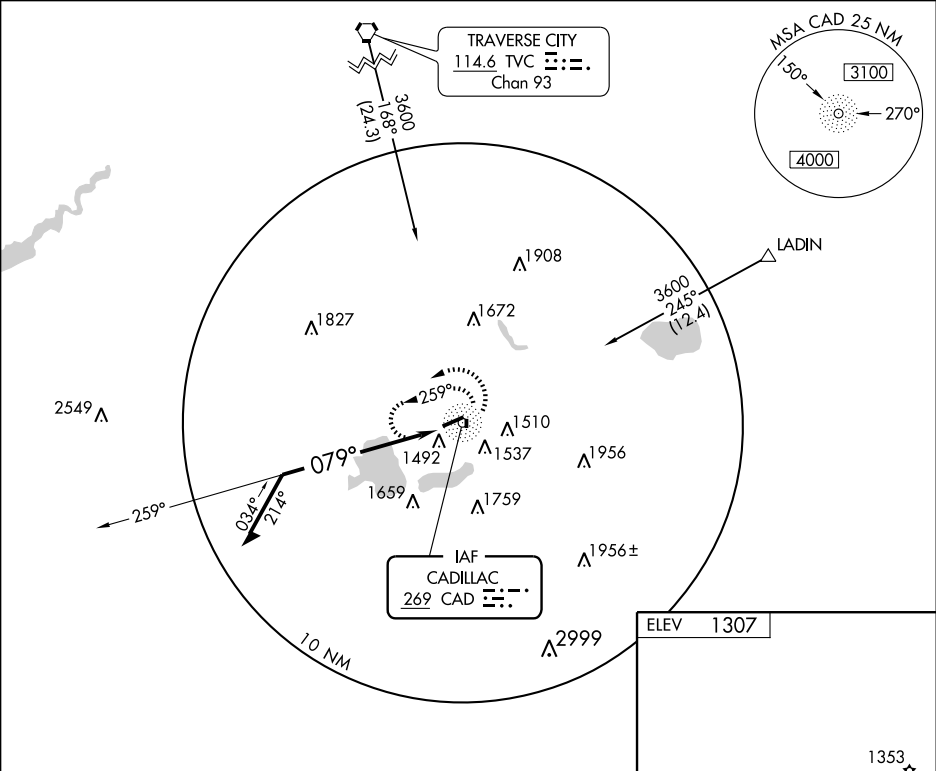
NDB CAD	APP CRS	Rwy Idg	5000
269	079°	TDZE	1307
		Apt Elev	1307

When local altimeter setting not received, use Houghton Lake altimeter setting and increase all MDA 140 feet. Increase S-7 Cats B and D visibility ¼ mile, Cat C ½ mile, and Circling Cat A, B and D visibility ¼ mile, Cat C ½ mile. For inoperative MALSR increase S-7 Cat B visibility to 1¼ miles. For inoperative MALSR when using Houghton Lake altimeter setting increase S-7 Cat A visibility to 1¼ and Cat B to 1½ mile.

MALSR

MISSED APPROACH:
Climbing left turn to 3600 in CAD NDB holding pattern.

AWOS-3 128.325	MINNEAPOLIS CENTER 132.9 338.3	GCO 121.725	UNICOM 122.8 (CTAF) 1
-------------------	-----------------------------------	----------------	--------------------------



CATEGORY	A	B	C	D
S-7	2120-¾ 813 (900-¾)	813 (900-¾)	2120-2 813 (900-2)	2120-2½ 813 (900-2½)
CIRCLING	2120-1 813 (900-1)	2120-1¼ 813 (900-1¼)	2120-2½ 813 (900-2½)	2120-2¾ 813 (900-2¾)

MIRL Rwy 7-25 1
REIL Rwy 7 and 25 1

NDB CAD	APP CRS	Rwy Idg	5000
269	235°	TDZE	1305
		Apt Elev	1307

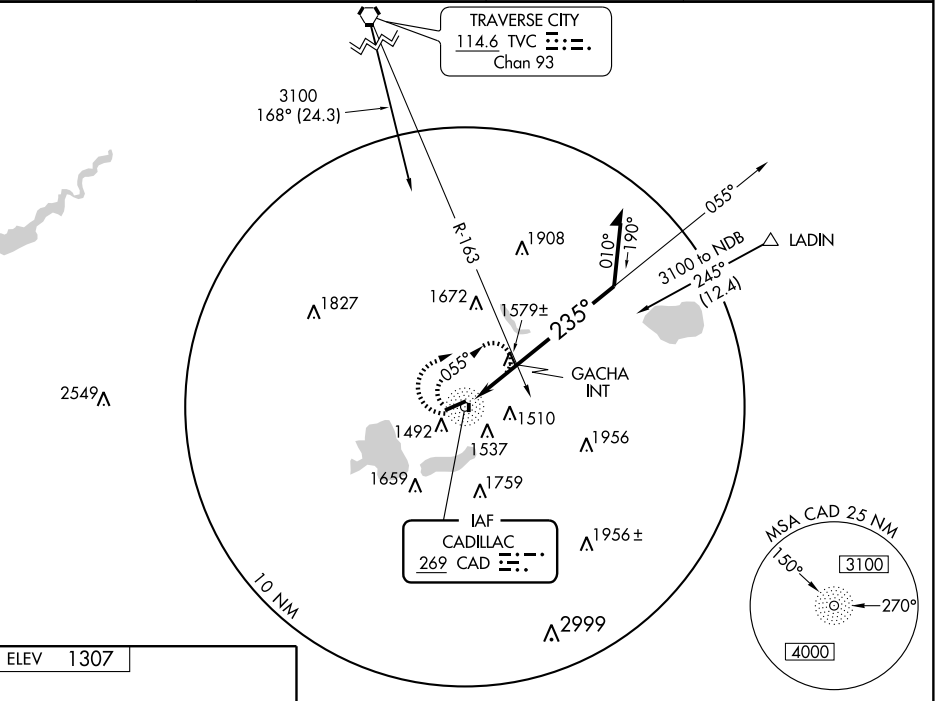
NDB RWY 25

CADILLAC / WEXFORD COUNTY (CAD)

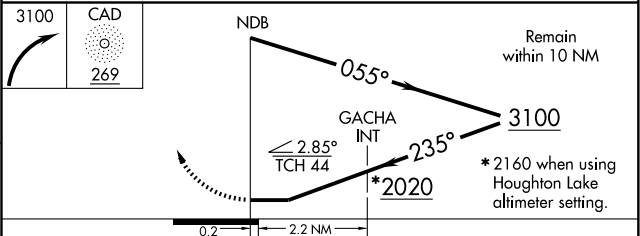
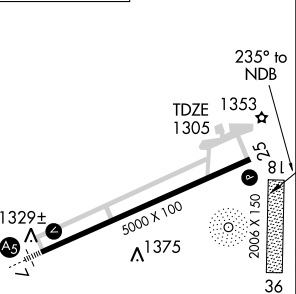
▼
▲
Visibility reduction by helicopters NA. When local altimeter setting not received, use Houghton Lake altimeter setting and increase all MDA 140 feet, S-25 and Circling visibilities Cat B ¼ mile, Cats C and D ½ mile. Increase GACHA fix minimums S-25 visibilities Cats C and D ½ mile, Circling Cat C ½ mile, Cat D ¼ mile.

MISSED APPROACH:
Climbing right turn to 3100
in CAD NDB holding pattern.

AWOS-3	MINNEAPOLIS CENTER	GCO	UNICOM
128.325	132.9 338.3	121.725	122.8 (CTAF) 0



ELEV 1307



CATEGORY	A	B	C	D
S-25	2020-1 715 (800-1)		2020-2 715 (800-2)	2020-2¼ 715 (800-2¼)
CIRCLING	2020-1 713 (800-1)		2020-2 713 (800-2)	2020-2¼ 713 (800-2¼)
GACHA MINIMUMS				
S-25	1880-1 575 (600-1)		1880-1½ 575 (600-1½)	1880-1¾ 575 (600-1¾)
CIRCLING	1880-1 573 (600-1)		1880-1½ 573 (600-1½)	1880-2 573 (600-2)

MIRL Rwy 7-25 0
REIL Rwys 7 and 25 0

WAAS CH 86413 W07A	APP CRS 070°	Rwy Idg TDZE Apt Elev	5000 1307 1307
--	------------------------	-----------------------------	---

RNAV (GPS) RWY 7
CADILLAC / WEXFORD COUNTY (CAD)

▽ DME/DME RNP-0.3 NA. When local altimeter setting not received, use Houghton Lake altimeter setting and increase all DA 137 feet and all MDA 140 feet, LPV visibilities all Cats ¼ mile, LNAV/VNAV visibilities all Cats ½ mile, LNAV visibilities Cats C and D ½ mile, Circling visibilities Cat C ½ mile and Cat D ¼ mile. For inoperative MALS/R when using Houghton Lake altimeter setting, increase LPV all Cats visibility to 1 ¼.

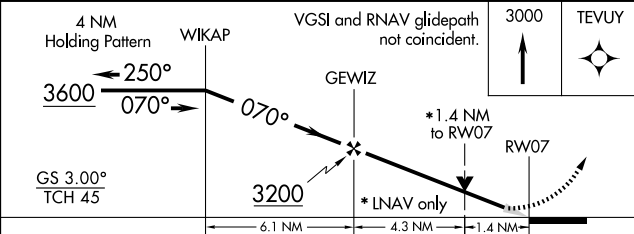
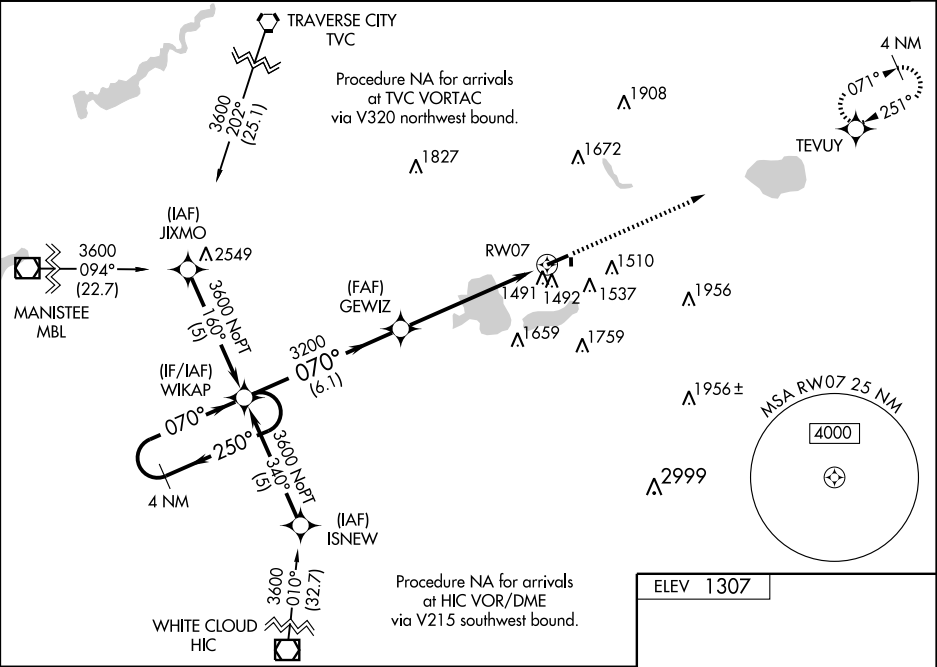
▲ For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). Baro-VNAV and VDP NA when using Houghton Lake altimeter setting.

MALS/R

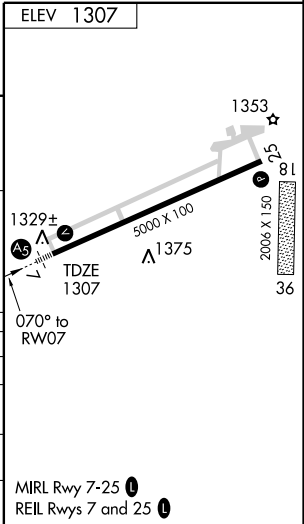
A5

MISSED APPROACH:
Climb to 3000 direct TEVUY and hold.

AWOS-3 128.325	MINNEAPOLIS CENTER 132.9 338.3	GCO 121.725	UNICOM 122.8 (CTAF)
--------------------------	--	-----------------------	-------------------------------



CATEGORY	A	B	C	D
LPV DA		1507-½	200 (200-½)	
LNAV/VNAV DA		1761-1	454 (500-1)	
LNAV MDA	1780-½ 473 (500-½)	1780-¾ 473 (500-¾)	1780-1 473 (500-1)	
CIRCLING	1860-1 553 (600-1)	1860-1½ 553 (600-1½)	1880-2 573 (600-2)	

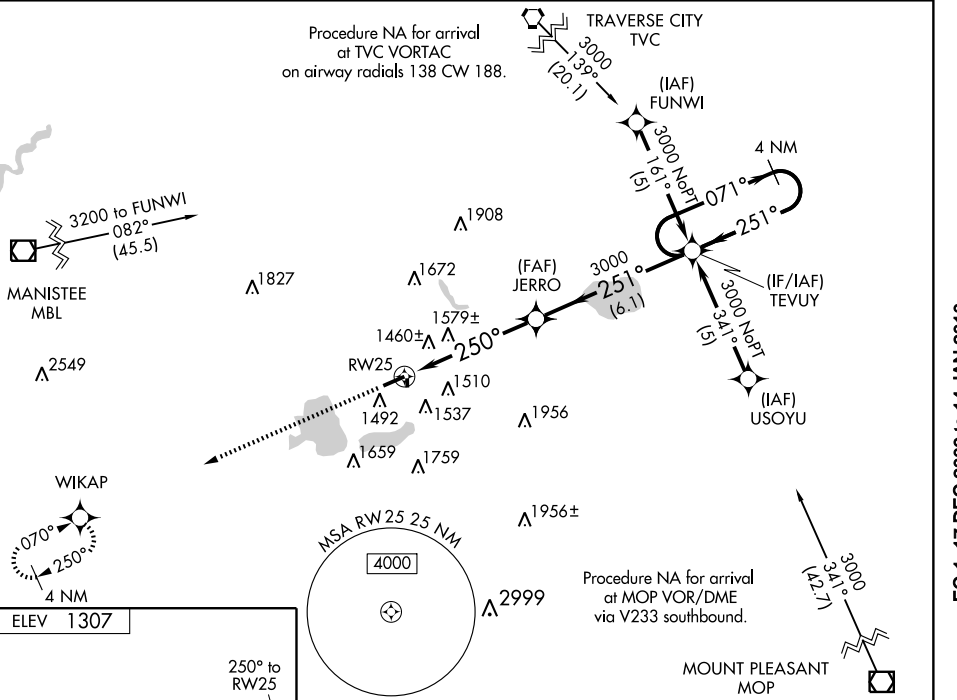


⚠ DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F).

⚠ Baro-VNAV and VDP NA when using Houghton Lake altimeter setting. When local altimeter setting not received, use Houghton Lake altimeter setting and increase all DA 137 feet, all MDA 140 feet, LPV and LNAV/VNAV visibilities all Cats ½ mile, LNAV visibilities Cats C and D ½ mile, Circling visibilities Cat C ½ mile and Cat D ¾ mile.

MISSED APPROACH: Climb to 3600 direct WIKAP and hold.

AWOS-3 128.325	MINNEAPOLIS CENTER 132.9 338.3	GCO 121.725	UNICOM 122.8 (CTAF) 0
--------------------------	--	-----------------------	--



<div><div>WIKAP</div><div>3600</div><div>250° to RW25</div><div>TDZE 1353 1305</div><div>1329±</div><div>5000 X 100</div><div>2006 X 150</div><div>25</div><div>81</div><div>36</div><div>1375</div></div>		<div><div>JERRO</div><div>TEVUY</div><div>4 NM Holding Pattern</div><div>071°</div><div>251°</div><div>3000</div><div>GS 3.00°</div><div>TCH 44</div></div>			
<div><div>1.6 NM</div><div>3.5 NM</div><div>6.1 NM</div></div>		<div><div>*1.6 NM to RW25</div><div>*LNAV only</div></div>			
CATEGORY	A	B	C	D	
LPV DA	1625-1¼		320 (400-1¼)		
LNAV/VNAV DA	1869-2		564 (600-2)		
LNAV MDA	1840-1	535 (600-1)	1840-1½ 535 (600-1½)	1840-1¾ 535 (600-1¾)	
CIRCLING	1860-1	553 (600-1)	1860-1½ 553 (600-1½)	1880-2 573 (600-2)	

MIRL Rwy 7-25 **0**

REIL Rwy 7 and 25 **0**

EC-1.17 DEC 2009 to 14 JAN 2010

APP CRS	Rwy Idg	4300
238°	TDZE	701
	Apt Elev	701

RNAV (GPS) RWY 23

CARO / TUSCOLA AREA (CFS)



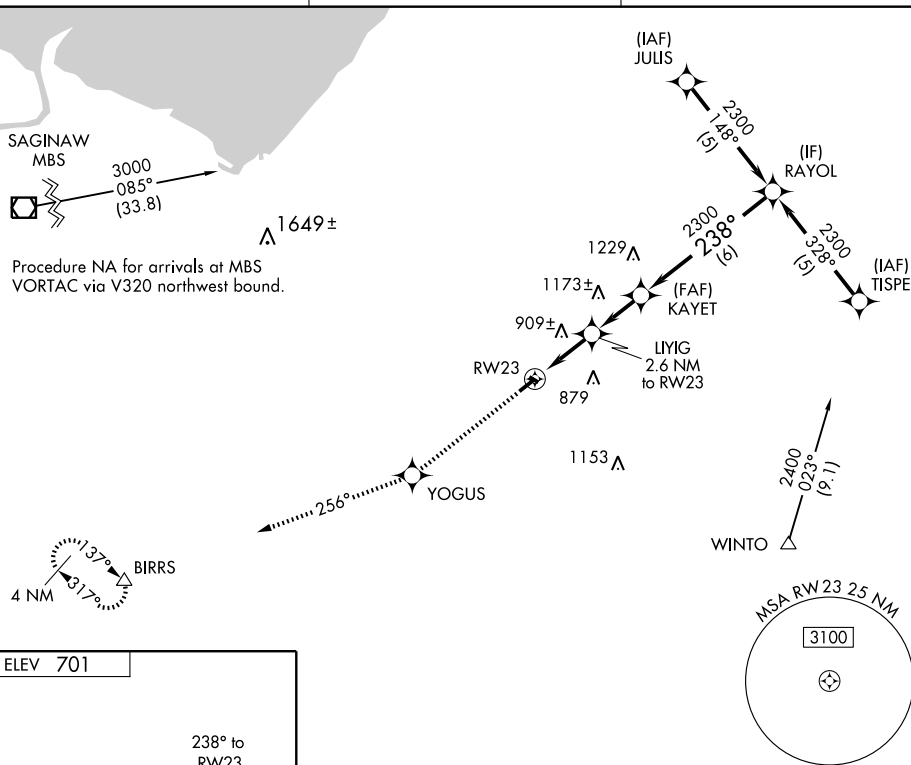
When local altimeter setting not received, use Saginaw/MBS Intl altimeter setting and increase all MDA 80 feet. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 3100 direct YOGUS and via 256° track to BIRRS and hold.

AWOS-3
119.275

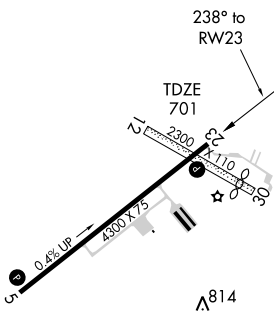
SAGINAW APP CON ★
120.95 235.625

UNICOM
123.0 (CTAF) **L**



EC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 701



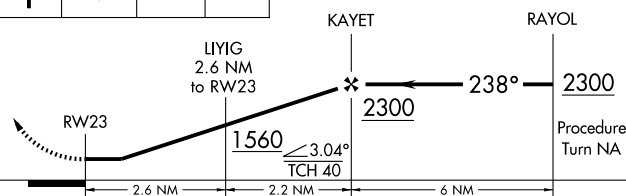
310

YOGUIS

548

RRS

VGSI and descent angles
not coincident.



CATEGORY

A

B

D

INAV MDA

1160-1 459 (500-1)

NA

CIRCLING

1220-1 519 (600-1)

NA

REIL Rwys 5 and 23 **L**MIRL Rwy 5-23 **L**

VOR/DME MBS 112.9 Chan 76	APP CRS 102°	Rwy Idg TDZE Apt Elev N/A N/A 701
---	------------------------	---

VOR/DME-A

CARO / TUSCOLA AREA (CF'S)

When local altimeter setting not received, use
Saginaw/MBS Intl altimeter setting and increase
all MDA 80 feet.

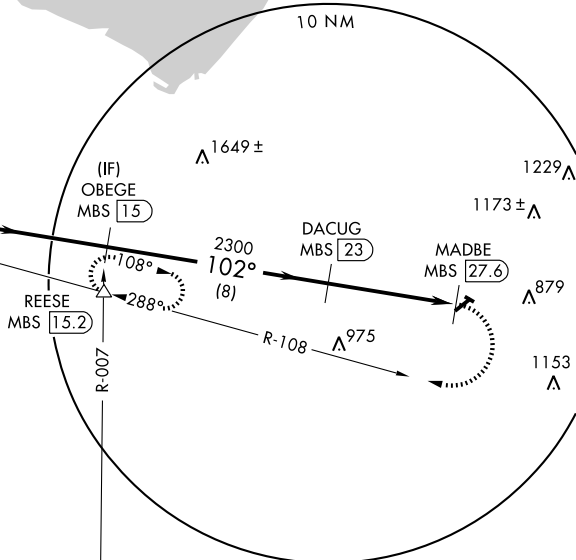
MISSED APPROACH: Climbing right turn to 3000 via
heading 220° and MBS VOR/DME R-108 to REESE INT
and hold.

AWOS-3
119.275

SAGINAW APP CON*
120.95 235.625

UNICOM
123.0 (CTAF) **0**

IAF
SAGINAW
112.9 MBS **76**
Chan **76**



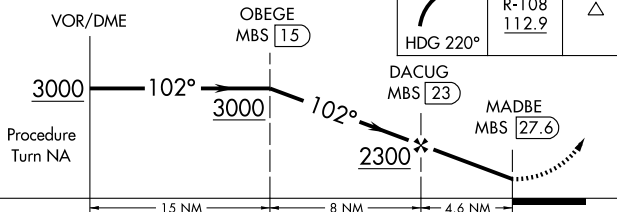
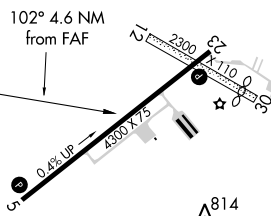
MSA MBS 25 NM

3100

116.9 FNT
Chan 116

2013

ELEV 701



CATEGORY	A	B	C	D
CIRCLING	1220-1 519 (600-1)	1220-1¼ 519 (600-1¼)	NA	

REIL Rwy 5 and 23 **0**
MIRL Rwy 5-23 **0**

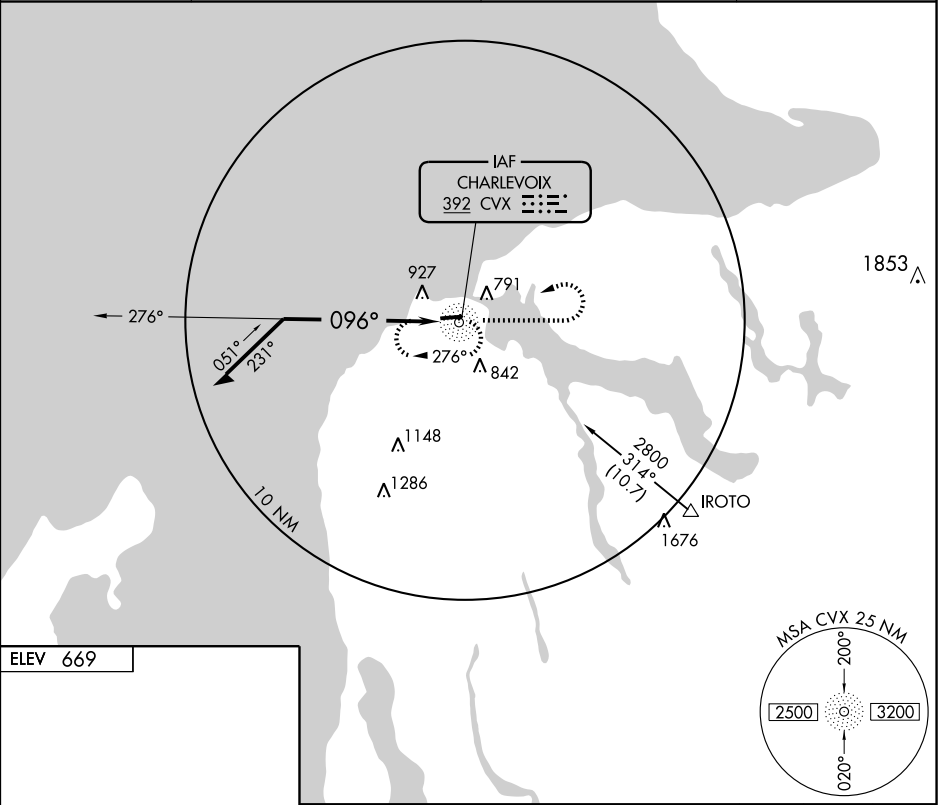
NDB CVX	APP CRS	Rwy Idg	4550
392	096°	TDZE	669
		Apt Elev	669

NDB RWY 9
CHARLEVOIX MUNI (CVX)

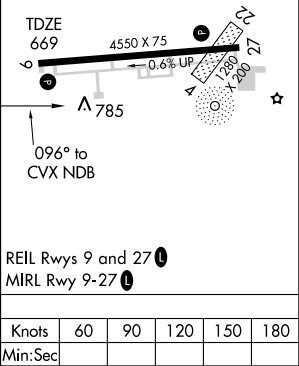
If local altimeter setting not received, use Pellston altimeter setting and increase all MDAs 80 feet.
 NA Circling to Rwy 4/22 NA at night.

MISSED APPROACH: Climb to 2000 then climbing left turn to 2800 direct CVX NDB and hold.

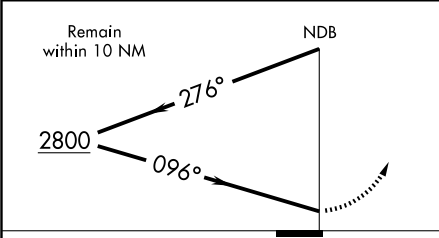
AWOS-3 120.0	MINNEAPOLIS CENTER 134.6 354.05	UNICOM 122.8 (CTAF)	GCO 121.725
-----------------	------------------------------------	------------------------	----------------



ELEV 669



2000	2800	CVX
		392



CATEGORY	A	B	C	D
S-9	1340-1 671 (700-1)		1340-2 671 (700-2)	1340-2 1/4 671 (700-2 1/4)
CIRCLING	1340-1 671 (700-1)		1340-2 671 (700-2)	1340-2 1/4 671 (700-2 1/4)

Knots	60	90	120	150	180
Min:Sec					

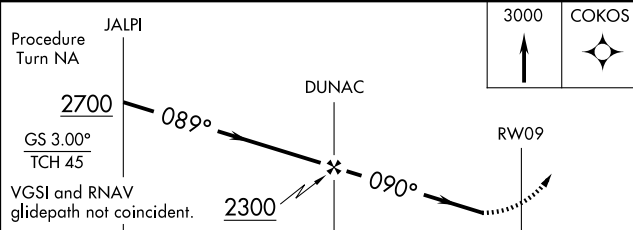
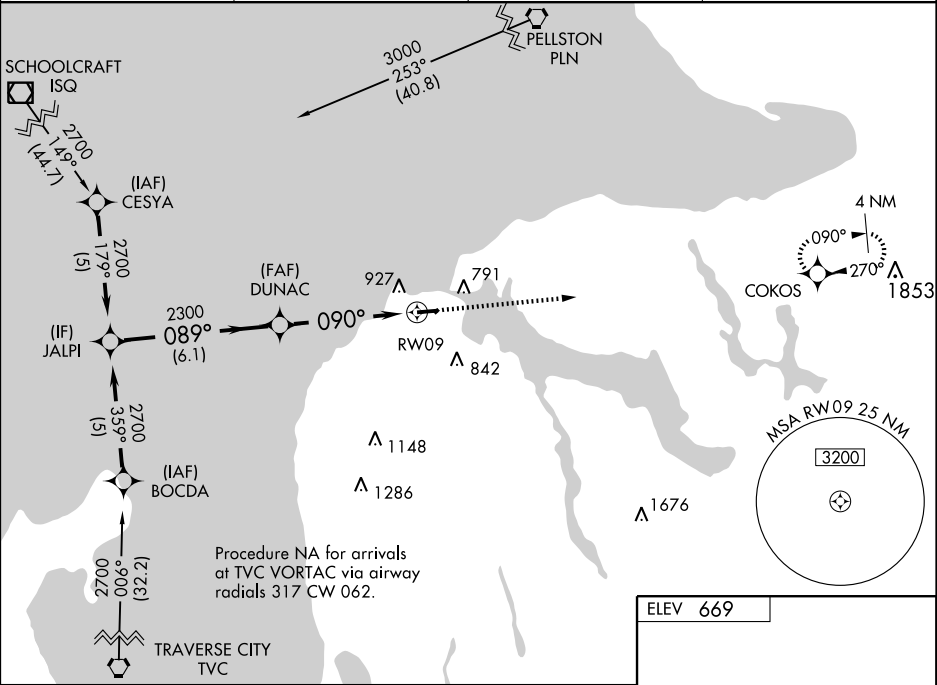
WAAS CH 97708 W09A	APP CRS 090°	Rwy ldg TDZE Apt Elev	4550 669 669
--	------------------------	-----------------------------	---

RNAV (GPS) RWY 9
CHARLEVOIX MUNI (CVX)

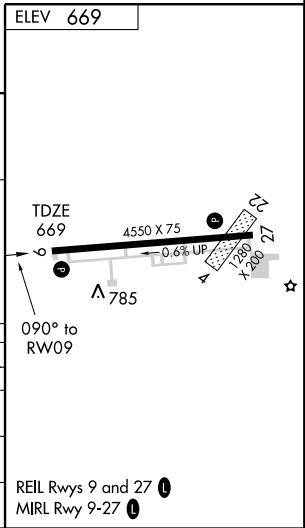
◀ Circling to Rwy 4/22 NA at night. Baro-VNAV NA when using Pellston altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Pellston altimeter setting and increase all DA 67 feet and all MDA 80 feet, increase LNAV/VNAV all Cats visibility ¼ mile, LNAV and Circling Cat C and D visibility ¼ mile.

MISSED APPROACH: Climb to 3000 direct COKOS and hold.

AWOS-3 120.0	MINNEAPOLIS CENTER 134.6 354.05	UNICOM 122.8 (CTAF) 1	GCO 121.725
------------------------	---	---------------------------------	-----------------------



CATEGORY	A	B	C	D
LPV DA		919-1	250 (300-1)	
LNAV/VNAV DA		1203-2	534 (600-2)	
LNAV MDA	1160-1	491 (500-1)	1160-1½ 491 (500-1½)	1160-1½ 491 (500-1½)
CIRCLING	1280-1	611 (700-1)	1280-1¾ 611 (700-1¾)	1280-2 611 (700-2)



APP CRS	Rwy Idg	4550
270°	TDZE	662
	Apt Elev	669

RNAV (GPS) RWY 27

If local altimeter setting not received, use Pellston
altimeter setting and increase all MDAs 80 feet.
DME/DME RNP-0.3 NA. Circling to Rwy 4/22 NA at night.
IAF ARM APPROACH MODE PRIOR TO IAF.

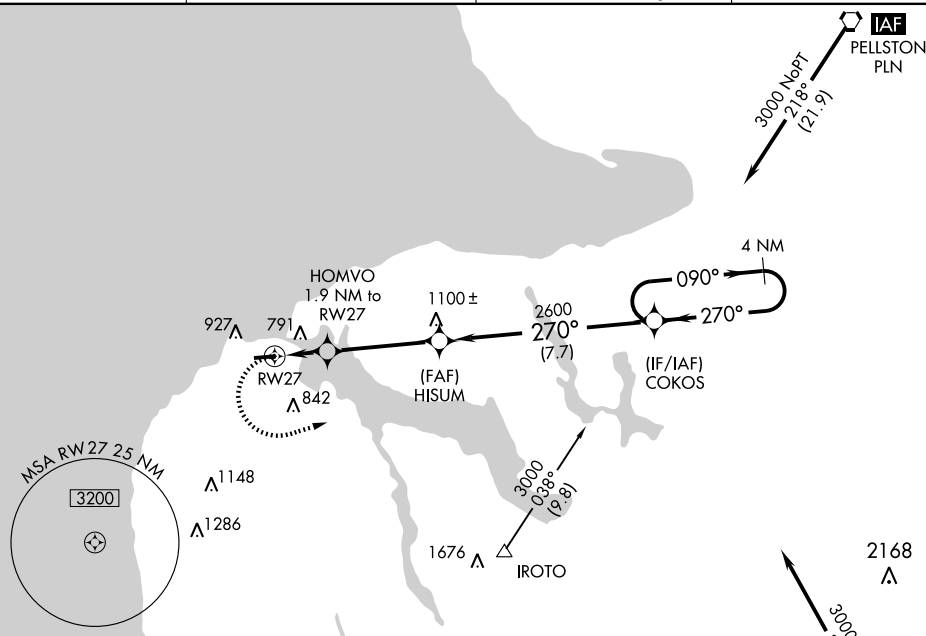
MISSED APPROACH: Climbing left turn to 3000 direct COKOS and hold.

AWOS-3
120.0

MINNEAPOLIS CENTER
134.6 354.05

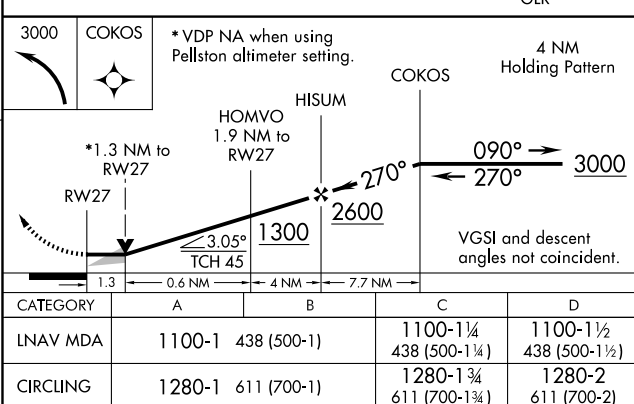
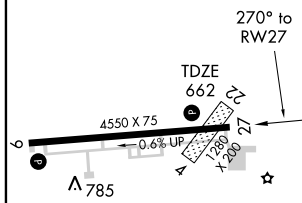
UNICOM
122.8 (CTAF) **L**

GCO
121.725



EC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 669

REIL Rwys 9 and 27 **L**MIRL Rwy 9-27 **L**

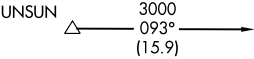
APP CRS 204°	Rwy Idg TDZE Apt Elev	3500 891 891
------------------------	-----------------------------	---

RNAV (GPS) RWY 20
CHARLOTTE / FITCH H. BEACH (F'PK)

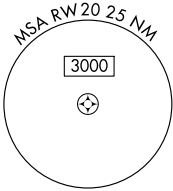
▽ If local altimeter setting not received, use Capital City altimeter setting and increase all MDAs 60 feet. **Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA.**

MISSED APPROACH: Climb to 3000 direct KUBVE and left turn via 109° track to LESSY and hold.

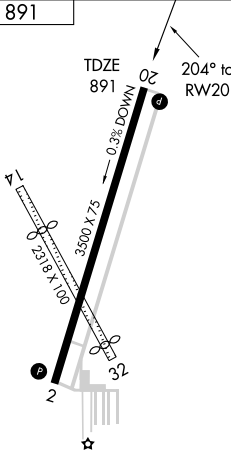
AWOS-3 118.075	LANSING APP CON 118.65 226.4	UNICOM 123.0 (CTAF) 1
--------------------------	--	---------------------------------



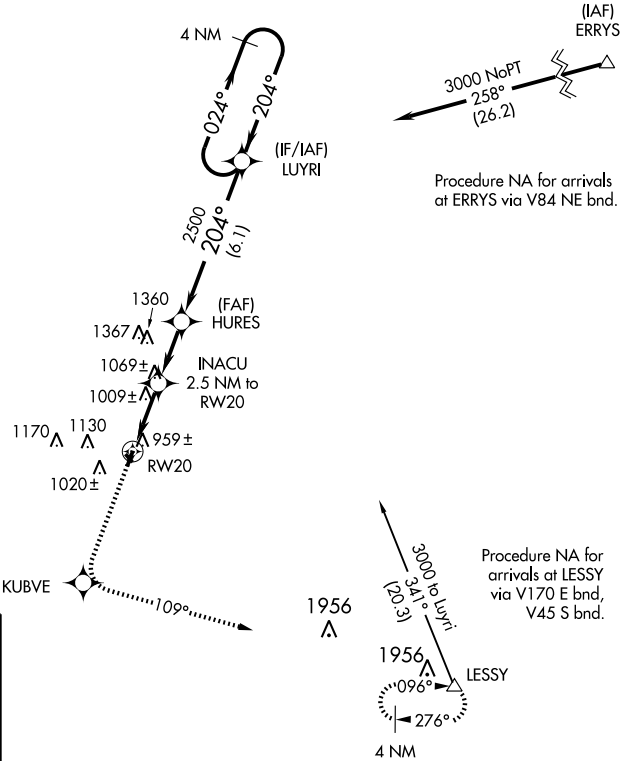
Procedure NA for arrivals at UNSUN via V510 W bnd.



ELEV 891



MIRL Rwy 2-20 **1**
REIL Rwy 2 and 20 **1**



3000	KUBVE	LESSY	VGSI and descent angles not coincident.	4 NM Holding Pattern
INACU 2.5 NM to RW20	HURES	LUYRI	024° → 3000	204° ← 3000
RW20	1720	2500	3.04° TCH 40	
2.5 NM	2.4 NM	6.1 NM		
CATEGORY	A	B	C	D
RNAV MDA	1300-1	409 (500-1)	1300-1¼ 409 (500-1¼)	NA
CIRCLING	1420-1 529 (600-1)	1480-1 589 (600-1)	1480-1½ 589 (600-1½)	NA

VORTAC LAN	APP CRS	Rwy Idg	3500
110.8	216°	TDZE	891
Chan 45		Apt Elev	891

VOR or GPS RWY 20
CHARLOTTE / FITCH H. BEACH (F'PK)

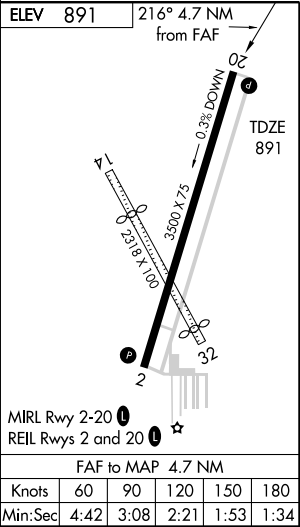
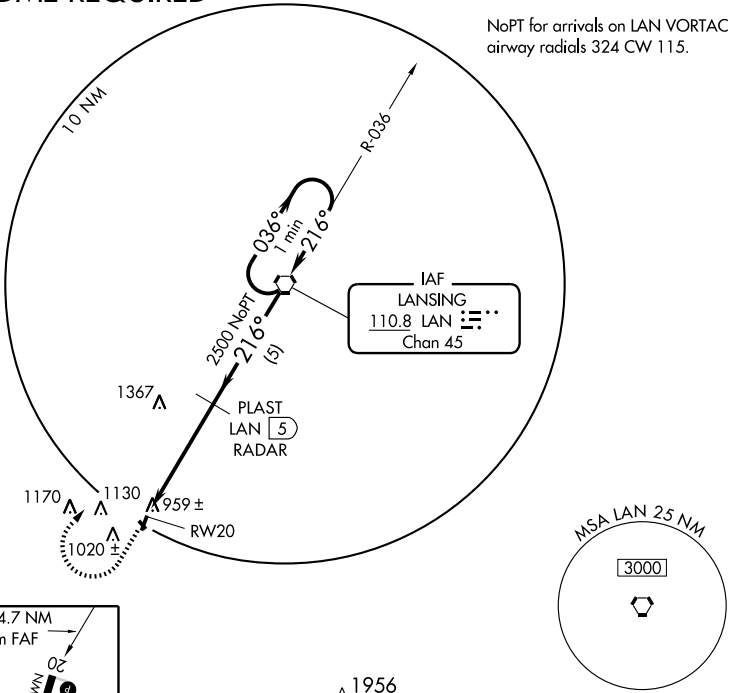
NA

Use Lansing altimeter setting.

MISSED APPROACH: Climb to 2500 via LAN R-216 then right turn direct LAN VORTAC and hold.

AWOS-3 118.075	LANSING APP CON 118.65 226.4	UNICOM 123.0 (CTAF) 0
-------------------	---------------------------------	--------------------------

RADAR or DME REQUIRED



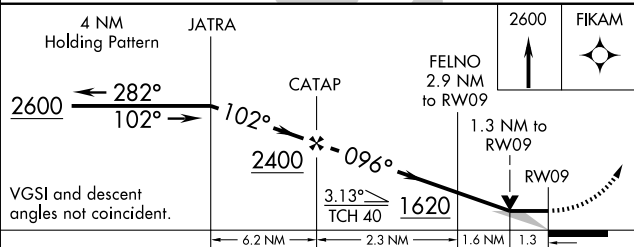
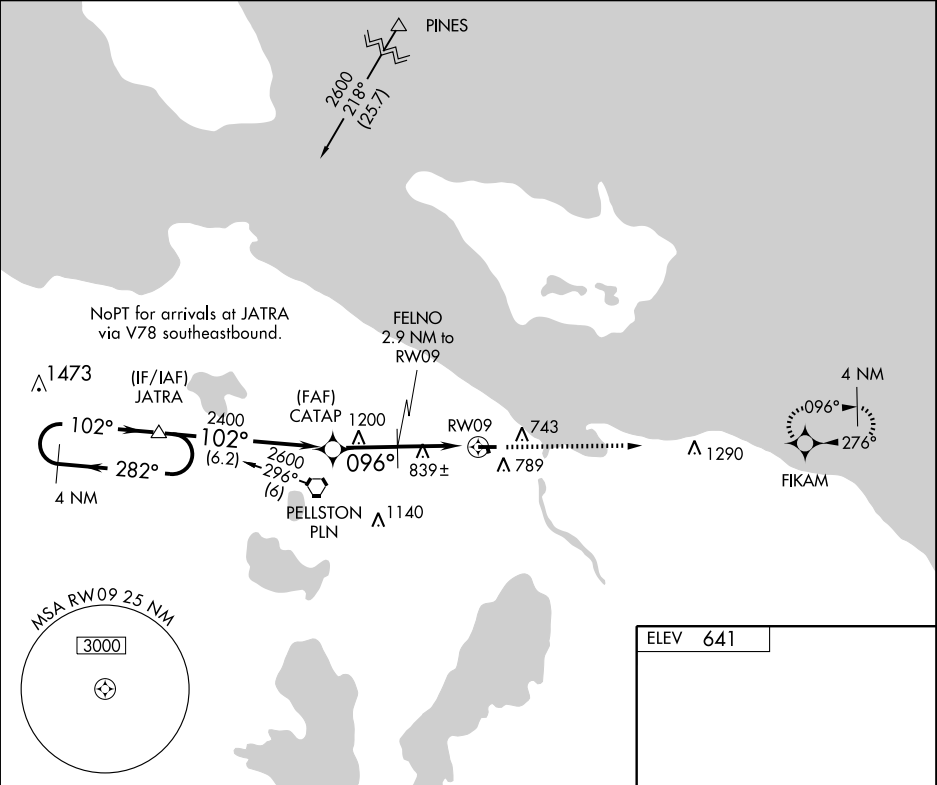
<div><div>2500</div><div>LAN R-216 110.8</div><div>LAN 110.8</div><div>PLST LAN 5 RADAR</div><div>RW20 LAN 9.7</div><div>216°</div><div>2500</div><div>036°</div><div>2500</div><div>216°</div><div>One Minute Holding Pattern</div></div>				
4.7 NM 5 NM				
CATEGORY	A	B	C	D
S-20	1400-1	509 (600-1)	1400-1½ 509 (600-1½)	NA
CIRCLING	1460-1 569 (600-1)	1520-1 629 (700-1)	1520-1¾ 629 (700-1¾)	NA

APP CRS	Rwy Idg	4000
096°	TDZE	641
	Apt Elev	641

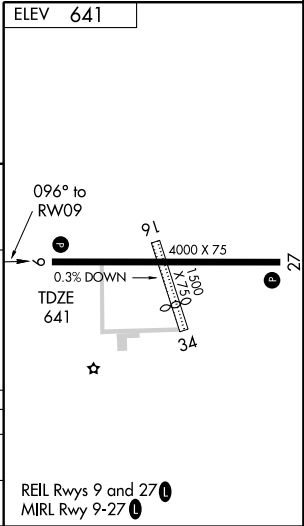
RNAV (GPS) RWY 9
CHEBOYGAN COUNTY (SLH)

<p> If local altimeter setting not received, use Pellston altimeter setting and increase all MDAs 60 feet. DME/DME RNP -0.3 NA. VDP NA with Pellston altimeter setting.</p>	<p>MISSED APPROACH: Climb to 2600 direct FIKAM and hold.</p>
--	--

AWOS-3 118.175	MINNEAPOLIS CENTER 134.6 354.05	UNICOM 122.8 (CTAF)	122.5
-------------------	------------------------------------	------------------------	-------



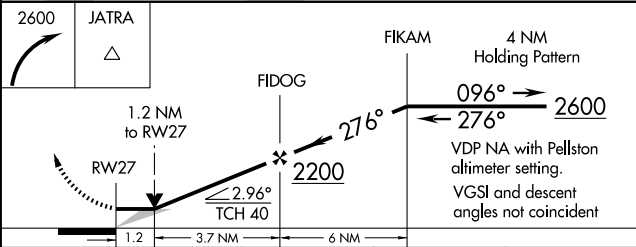
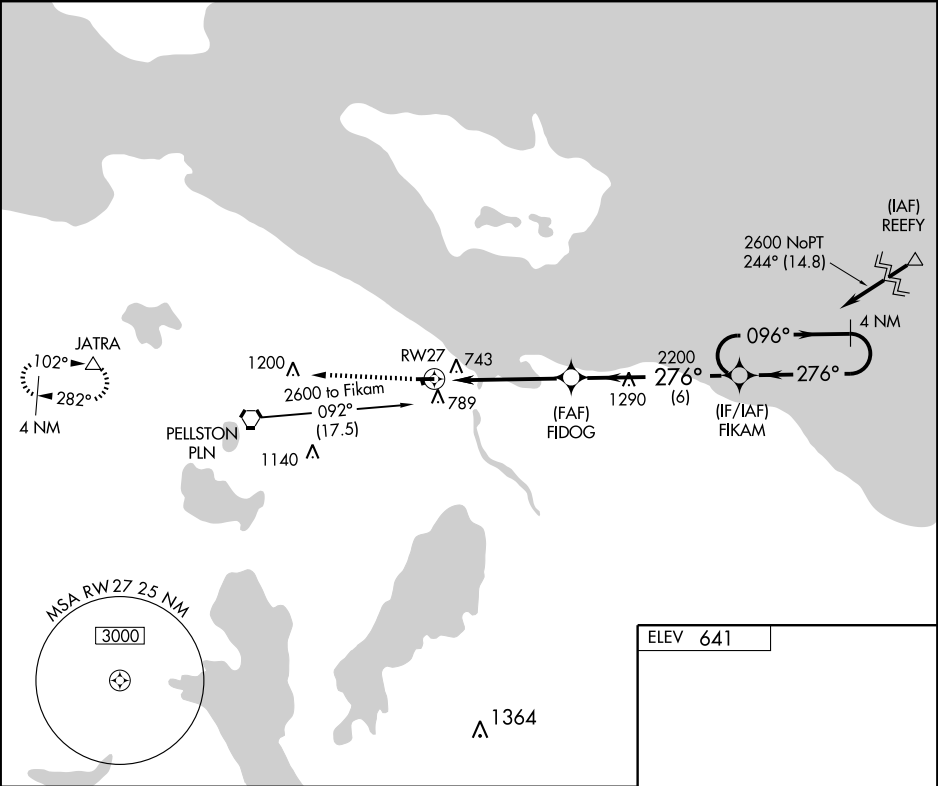
CATEGORY	A	B	C	D
LNAV MDA	1100-1	459 (500-1)	1100-1¼ 459 (500-1¼)	NA
CIRCLING	1140-1	499 (500-1)	1140-1½ 499 (500-1½)	NA



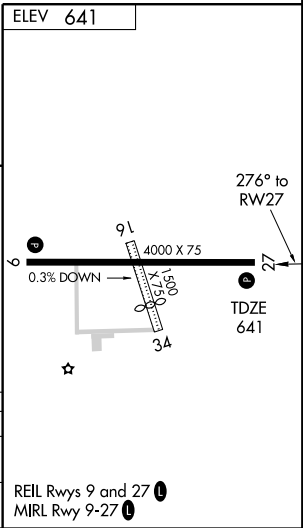
APP CRS	Rwy Idg	4000
276°	TDZE	641
	Apt Elev	641

RNAV (GPS) RWY 27
CHEBOYGAN COUNTY (SLH)

<p>▼ If local altimeter setting not received, use Pellston altimeter setting and increase all MDAs 60 feet. ▲ NA GPS or RNP -0.3 required. DME/DME RNP -0.3 NA.</p>		MISSED APPROACH: Climbing right turn to 2600 direct JATRA WP and hold.	
AWOS-3 118.175	MINNEAPOLIS CENTER 134.6 354.05	UNICOM 122.8 (CTAF)	122.5 0



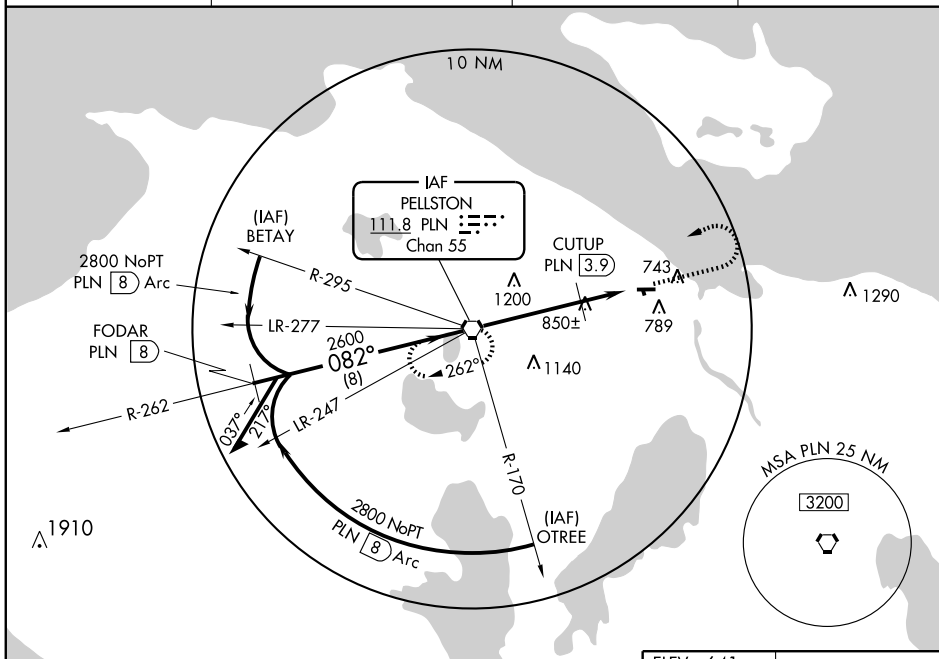
CATEGORY	A	B	C	D
LNAV MDA	1060-1	419 (500-1)	1060-1½ 419 (500-1½)	NA
CIRCLING	1140-1	499 (500-1)	1140-1½ 499 (500-1½)	NA



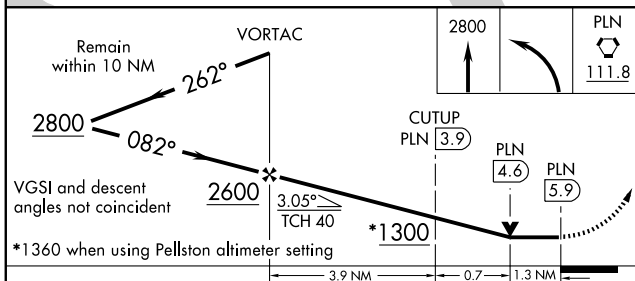
VOR RWY 9
CHEBOYGAN COUNTY (SLH)

MISSED APPROACH: Climb to 2800 then left turn direct PLN VORTAC and hold.

122.5 L



EC-1. 17 DEC 2009 to 14 JAN 2010



CATEGORY	A	B	C	D
S-9	1300-1	659 (700-1)	1300-1 $\frac{3}{4}$ 659 (700-1 $\frac{3}{4}$)	NA
CIRCLING	1300-1	659 (700-1)	1300-1 $\frac{3}{4}$ 659 (700-1 $\frac{3}{4}$)	NA
DME MINIMUMS				
S-9	1100-1	459 (500-1)	1100-1 $\frac{1}{4}$ 459 (500-1 $\frac{1}{4}$)	NA
CIRCLING	1140-1	499 (500-1)	1140-1 $\frac{1}{2}$ 499 (500-1 $\frac{1}{2}$)	NA

ELEV 641

082° 5.9 NM

from FAF

/

Ⓟ

0.3% DOWN

TDZE

641

041

☆

1

RFII R_{wys} 9 d

MIRL Rwy 9-2

	FAC
--	-----

	FAF
Keep	10

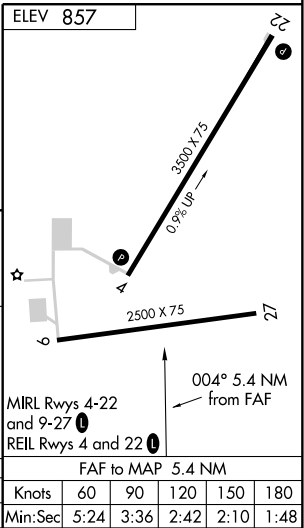
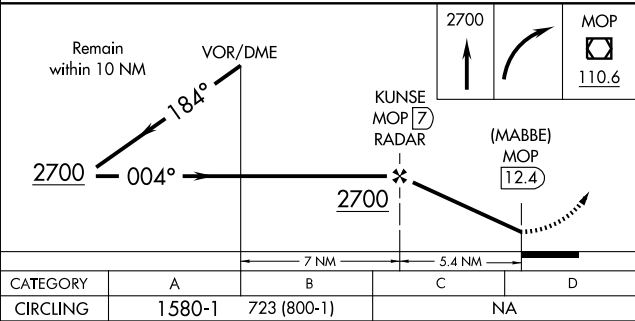
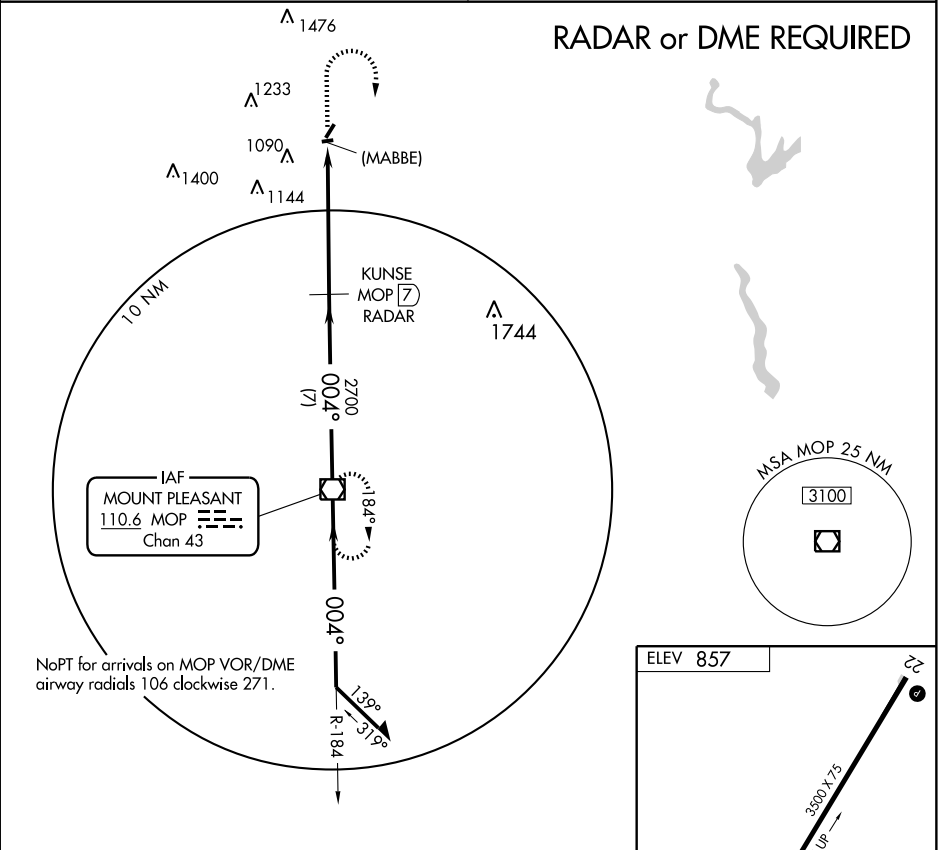
Knots	60
Miles	5.54

Min:Sec	5:54
---------	------

VOR/DME MOP 110.6 Chan 43	APP CRS 004°	Rwy Idg TDZE Apt Elev	N/A N/A 857
---	------------------------	-----------------------------	--------------------------

VOR or GPS-A
CLARE MUNI (48D)

<div><div><div></div><div>NA</div></div><div>Use Saginaw altimeter setting.</div></div>	MISSED APPROACH: Climb to 2700, then right turn direct MOP VOR/DME and hold.
SAGINAW APP CON ★ 126.45 235.625	UNICOM 122.8 (CTAF) 0



WAAS CH 56506 W07A	APP CRS 069°	Rwy Idg TDZE Apt Elev	5350 959 959
--	------------------------	-----------------------------	---

RNAV (GPS) RWY 7

COLDWATER/BRANCH COUNTY MEMORIAL (OEB)

▼ When local altimeter setting not received, use Sturgis altimeter setting and increase all DAs 48 feet and LPV visibility $\frac{1}{4}$ mile all Cats and all MDAs 60 feet and LNAV Cat C visibility $\frac{1}{4}$ mile. Baro-VNAV NA when using Sturgis altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. Circling to Rwy 16-34 NA.

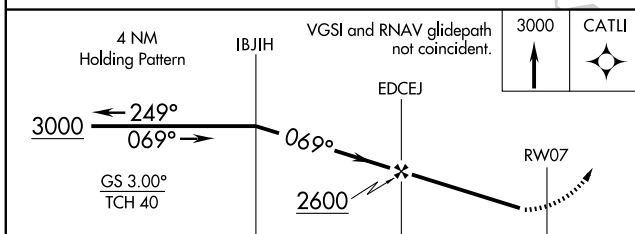
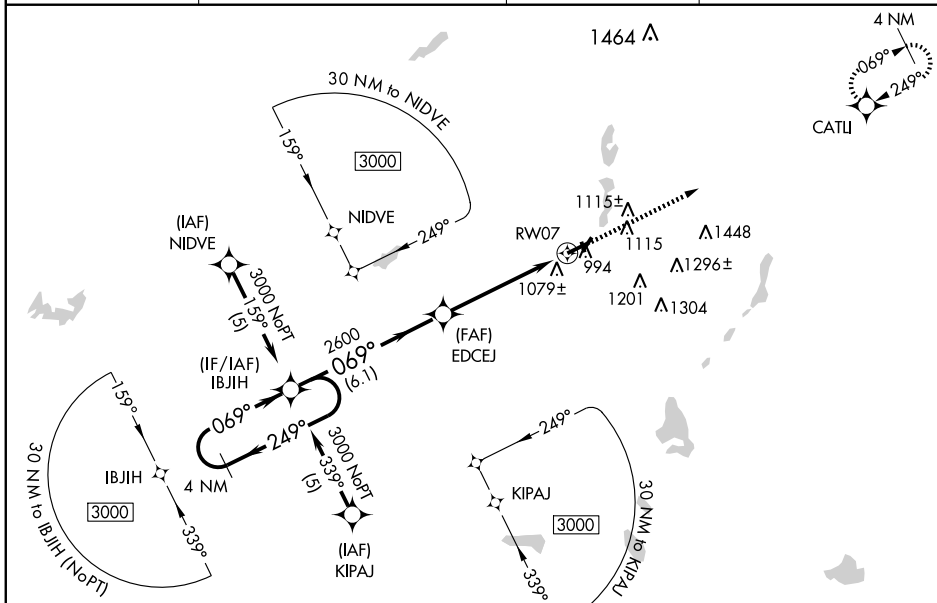
MISSED APPROACH:
Climb to 3000 direct
CATLI and hold.

AWOS-3
118.125

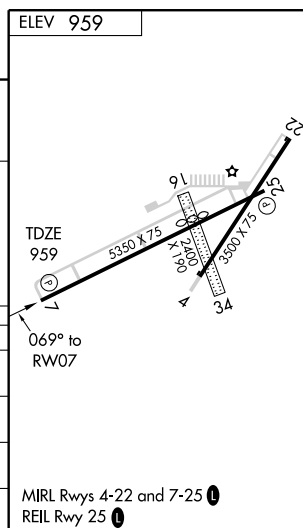
KALAMAZOO APP CON ★
121.2 340.9

GCO
121.725

UNICOM
122.7 (CTAF) 0



CATEGORY	A	B	C	D
LPV DA	1307-1¼	348 (400-1¼)		NA
LNAV/ VNAV DA	1418-1¾	459 (500-1¾)		NA
LNAV MDA	1420-1 461 (500-1)	1420-1¼ 461 (500-1¼)		NA
CIRCLING	1420-1 461 (500-1)	1480-1½ 521 (600-1½)		NA



WAAS CH 99606 W25A	APP CRS 249°	Rwy Idg 5350 TDZE 959 Apt Elev 959
--	------------------------	---

RNAV (GPS) RWY 25

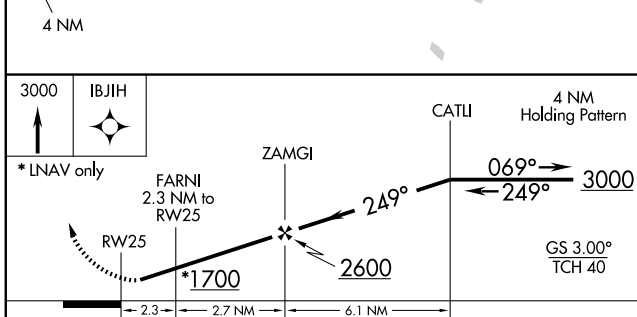
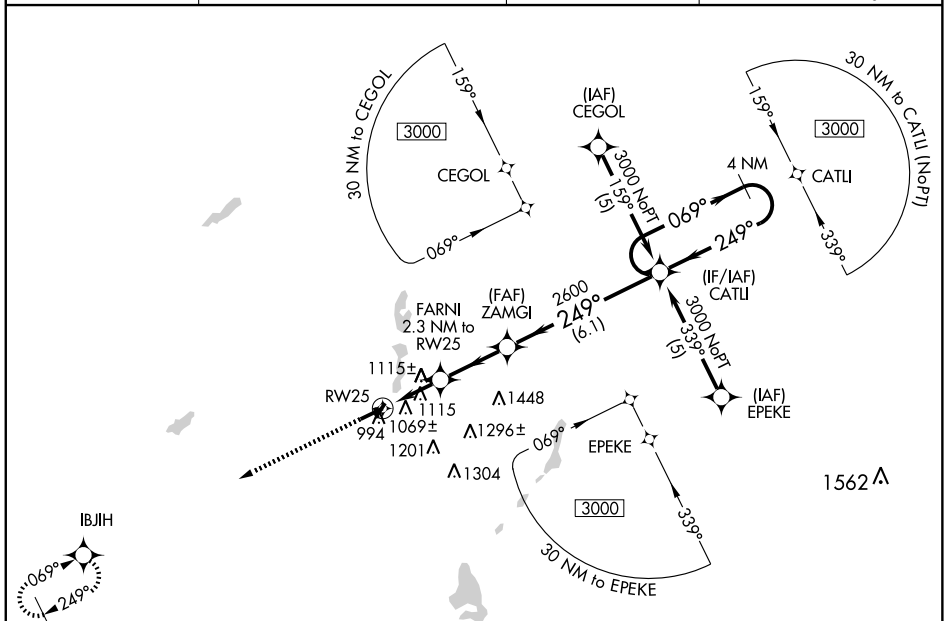
COLDWATER/BRANCH COUNTY MEMORIAL (OEB)



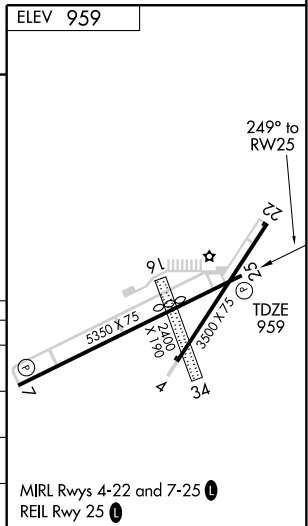
When local altimeter setting not received, use Sturgis altimeter setting and increase all DAs 48 feet and LPV visibility $\frac{1}{4}$ mile all Cats and all MDAs 60 feet and LNAV Cat C visibility $\frac{1}{4}$ mile. Baro-VNAV NA when using Sturgis altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. Circling to Rwy 16-34 NA.

MISSED APPROACH:
Climb to 3000 direct
IBJH and hold.

AWOS-3 118.125	KALAMAZOO APP CON ★ 121.2 340.9	GCO 121.725	UNICOM 122.7 (CTAF) 0
--------------------------	---	-----------------------	---------------------------------



CATEGORY	A	B	C	D
LPV DA	1306-1¼	347 (400-1¼)		NA
LNAV/ VNAV DA	1424-1¾	465 (500-1¾)		NA
LNAV MDA	1420-1	461 (500-1)	1420-1¼ 461 (500-1¼)	NA
CIRCLING	1420-1	461 (500-1)	1480-1½ 521 (600-1½)	NA



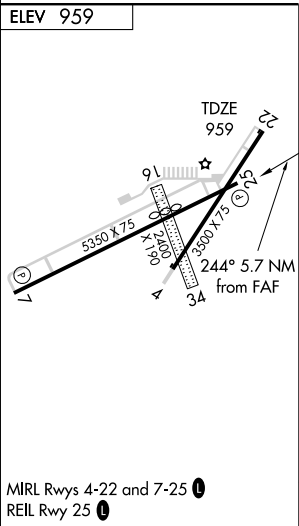
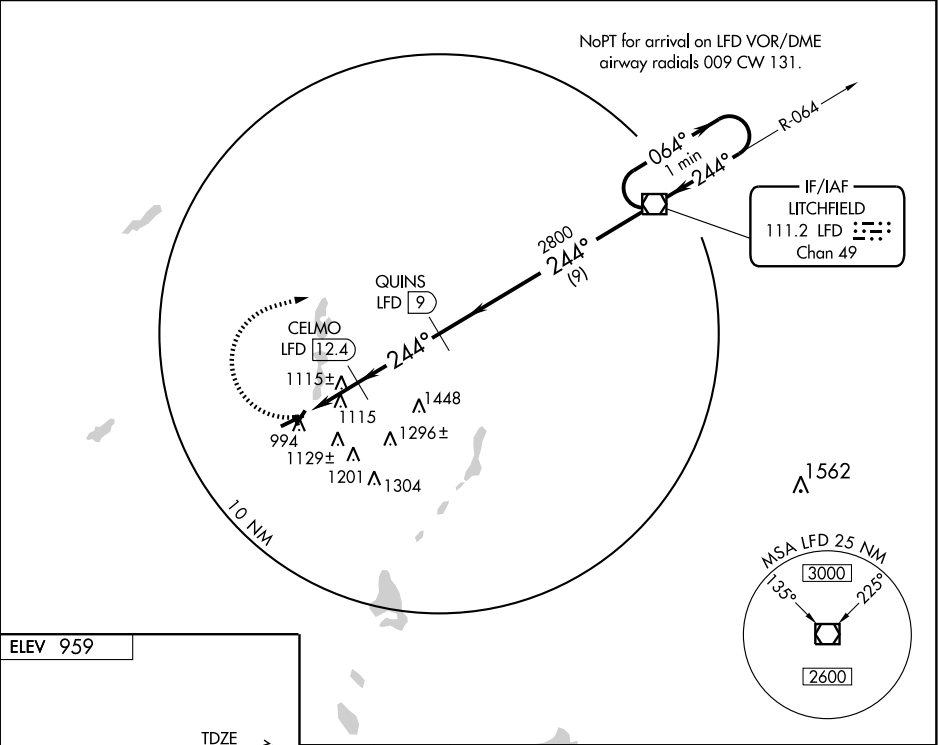
VOR/DME LFD	APP CRS	Rwy Idg	5350
111.2	244°	TDZE	959
Chan 49		Apt Elev	959

VOR/DME RWY 25

COLDWATER/ BRANCH COUNTY MEMORIAL (OEB)

<p>▼ When local altimeter setting not received, use Sturgis altimeter setting and increase all MDAs 60 feet and S-25 Cat C visibility ¼ mile. ▲ Circling to Rwy 16-34 NA. Visibility reduction by helicopters NA.</p>	<p>MISSED APPROACH: Climbing right turn to 2800 direct LFD VOR/DME and hold.</p>
---	--

AWOS-3 118.125	KALAMAZOO APP CON * 121.2 340.9	GCO 121.725	UNICOM 122.7 (CTAF) 0
-------------------	------------------------------------	----------------	--------------------------



	2800	LFD 111.2	QUINS LFD 9	VOR/DME
				One Minute Holding Pattern
		CELMO LFD 12.4		
		LFD 14.7	2800	244° 064° 2800
		1700	244°	244°
		2.3	3.4 NM	9 NM
CATEGORY	A	B	C	D
S-25	1420 - 1 461 (500-1)		1420 - 1 ¼ 461 (500-1 ¼)	NA
CIRCLING	1420 - 1 461 (500-1)		1480 - 1 ½ 521 (600-1 ½)	NA

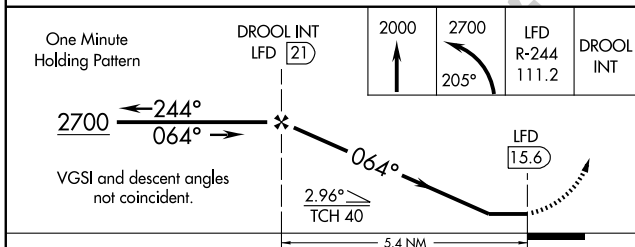
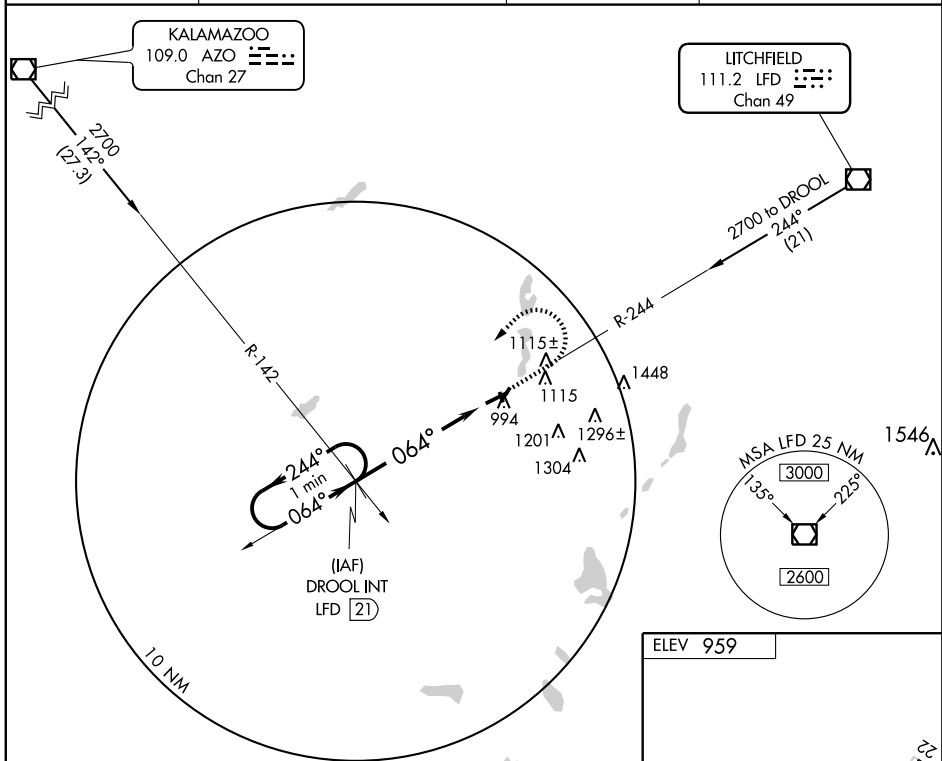
VOR RWY 7

COLDWATER / BRANCH COUNTY MEMORIAL (OEB)

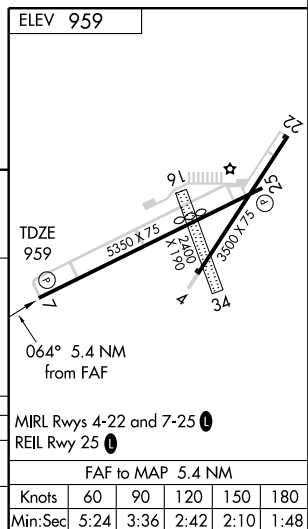
VOR/DME LFD 111.2 Chan 49	APP CRS 064°	Rwy Idg 5350 TDZE 959 Apt Elev 959
---	------------------------	---

MISSED APPROACH: Climb to 2000 then climbing left turn to 2700 via heading 205° and LFD R-244 to DROOL INT/LFD 21 DME and hold.

AWOS-3 118.125	KALAMAZOO APP CON ★ 121.2 340.9	GCO 121.725	UNICOM 122.7 (CTAF) 0
--------------------------	---	-----------------------	---------------------------------



CATEGORY	A	B	C	D
S-7	1440-1	481 (500-1)	1440-1 $\frac{1}{4}$ 481 (500- $\frac{1}{4}$)	NA
CIRCLING	1440-1	481 (500-1)	1480-1 $\frac{1}{2}$ 521 (600- $\frac{1}{2}$)	NA

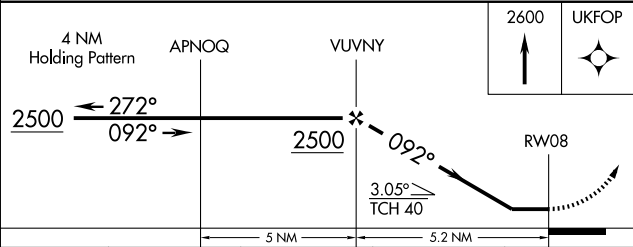
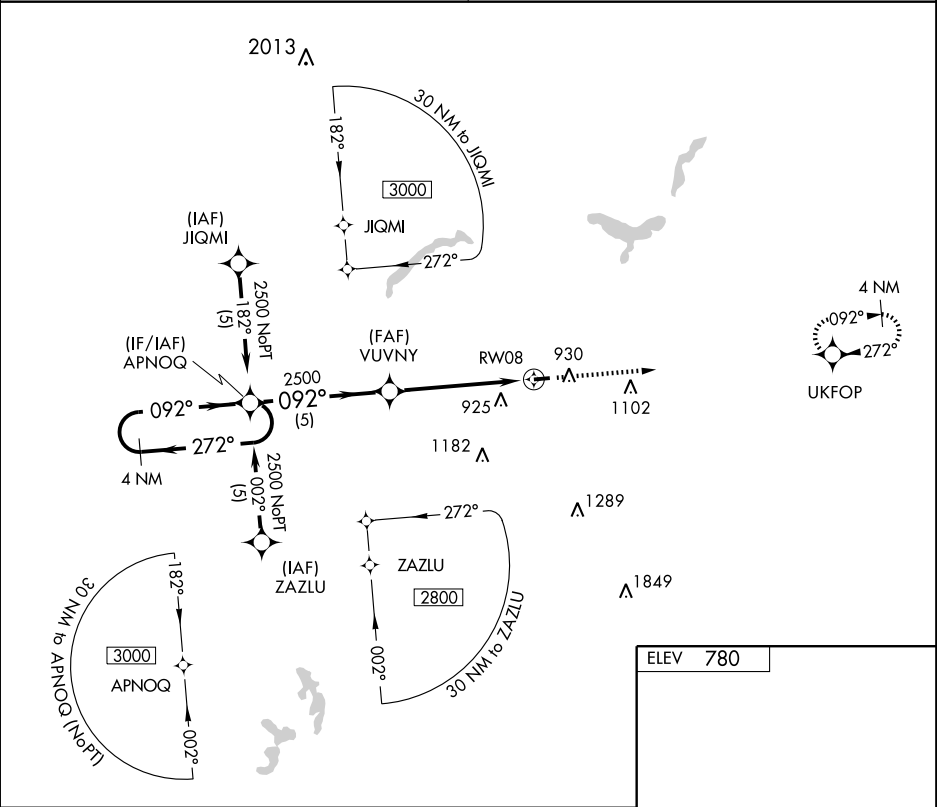


APP CRS	Rwy Idg	3299
092°	TDZE	780
	Apt Elev	780

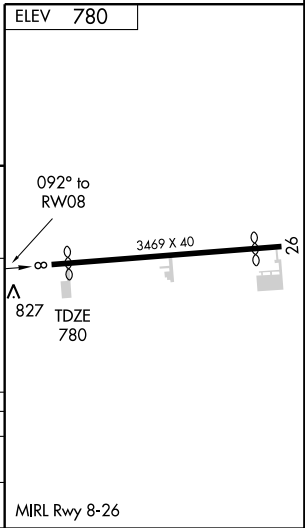
RNAV (GPS) RWY 8

DAVISON / ATHELONE WILLIAMS MEMORIAL (6G0)

 NA	Use Flint altimeter setting. DME/DME RNP-0.3 NA.	MISSED APPROACH: Climb to 2600 direct UKFOP WP and hold.
FLINT APP CON ★ 118.8 257.9		CTAF 122.9



CATEGORY	A	B	C	D
LNAV MDA	1280-1	500 (500-1)	1280-1¼ 500 (500-1¼)	NA
CIRCLING	1340-1¼	560 (600-1¼)	1340-1½ 560 (600-1½)	NA



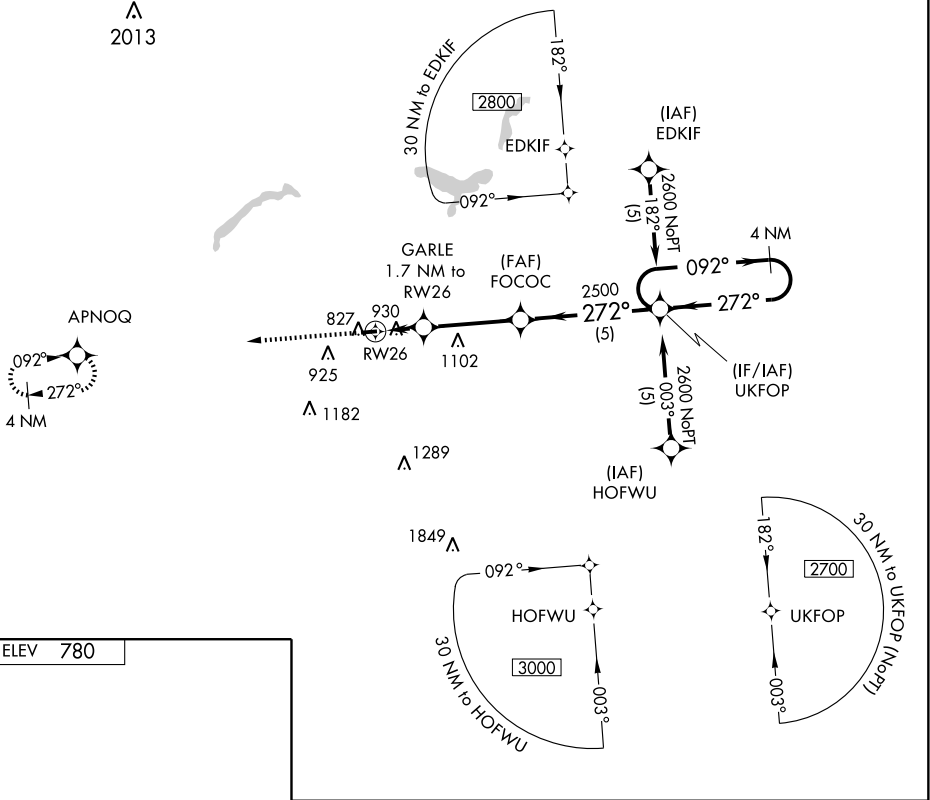
APP CRS	Rwy Idg	3101
272°	TDZE	780
	Apt Elev	780

RNAV (GPS) RWY 26

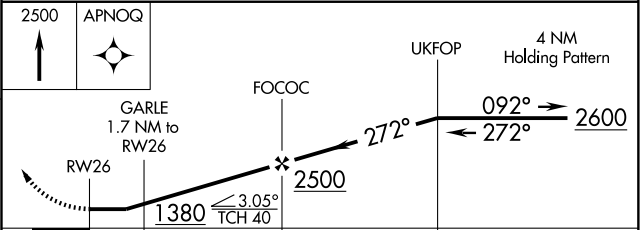
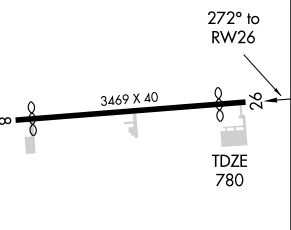
DAVISON / ATHELONE WILLIAMS MEMORIAL (6G4)

<div><div>▼</div><div>▲ NA</div></div> <div>Use Flint altimeter setting. DME/DME RNP-0.3 NA.</div>	MISSED APPROACH: Climb to 2500 direct APNOQ WP and hold.
FLINT APP CON ★ 118.8 257.9	CTAF 122.9

▲
2013



ELEV 780



CATEGORY	A	B	C	D
LNAV MDA	1280-1	500 (500-1)	1280-1¼ 500 (500-1¼)	NA
CIRCLING	1340-1¼	560 (600-1¼)	1340-1½ 560 (600-1½)	NA

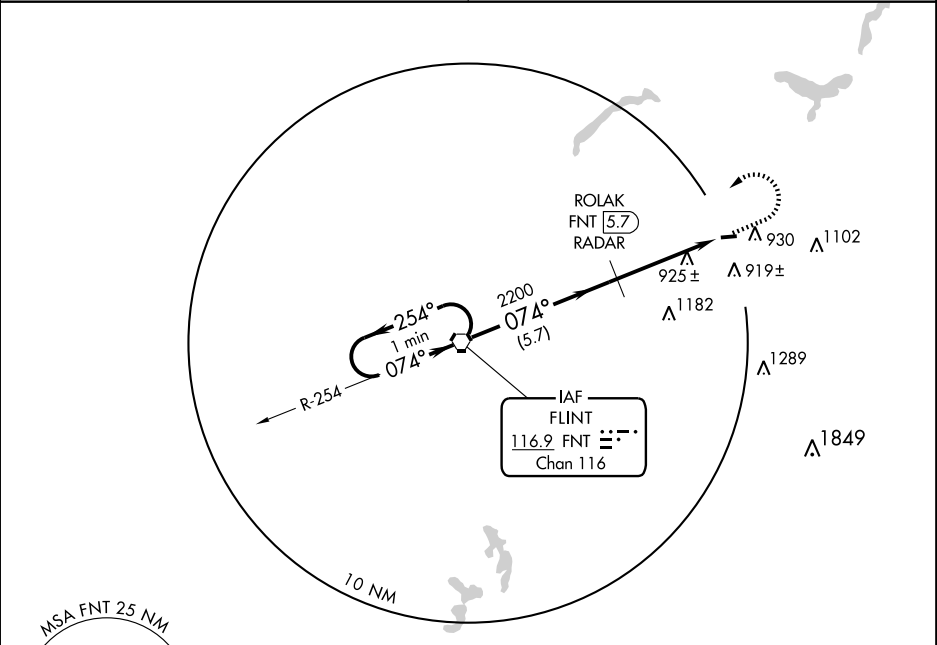
MIRL Rwy 8-26

VOR RWY 8

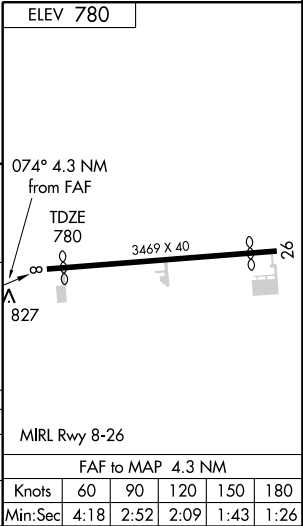
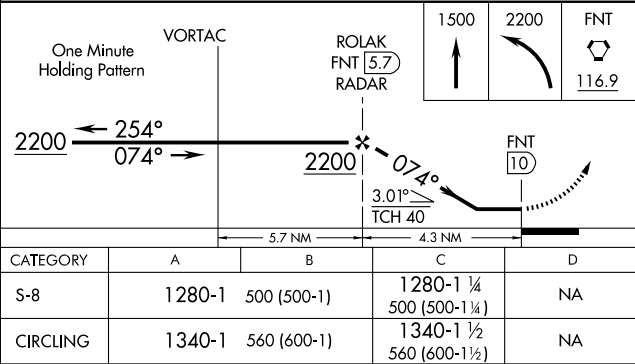
DAVISON / ATHELONE WILLIAMS MEMORIAL (6G0)

VORTAC FNT	APP CRS	Rwy Idg	3299
116.9	074°	TDZE	780
Chan 116		Apt Elev	780

<div><div></div><div>NA</div></div>	Use Flint altimeter setting.	MISSED APPROACH: Climb to 1500, then climbing left turn to 2200 direct FNT VORTAC and hold.
FLINT APP CON ★ 118.8 257.9		CTAF 122.9



RADAR REQUIRED



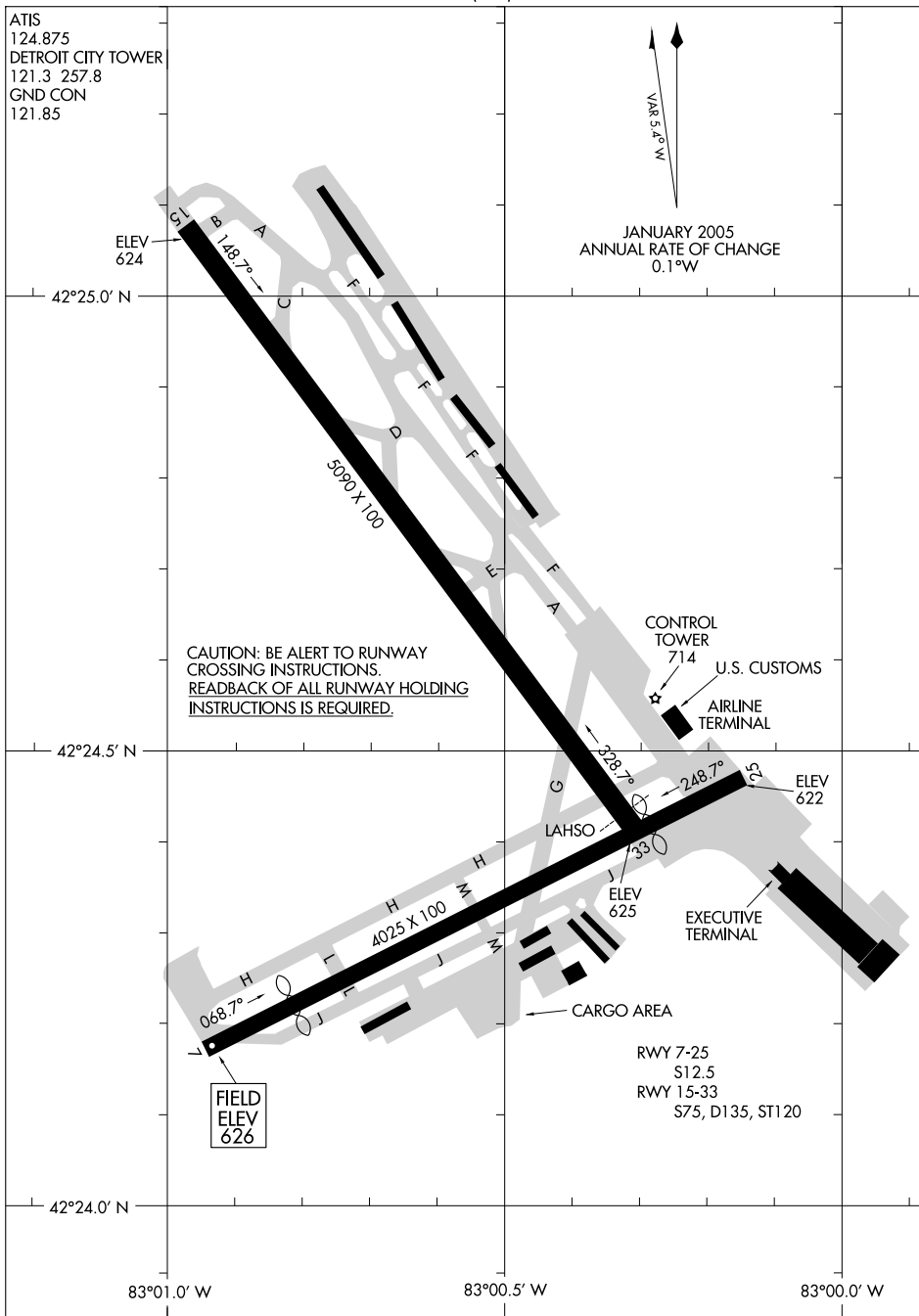
AIRPORT DIAGRAM

AL-118 (FAA)

DETROIT/ COLEMAN A. YOUNG MUNI (DET)

DETROIT, MICHIGAN

ATIS
124.875
DETROIT CITY TOWER
121.3 257.8
GND CON
121.85



EC-1. 17 DEC 2009 to 14 JAN 2010

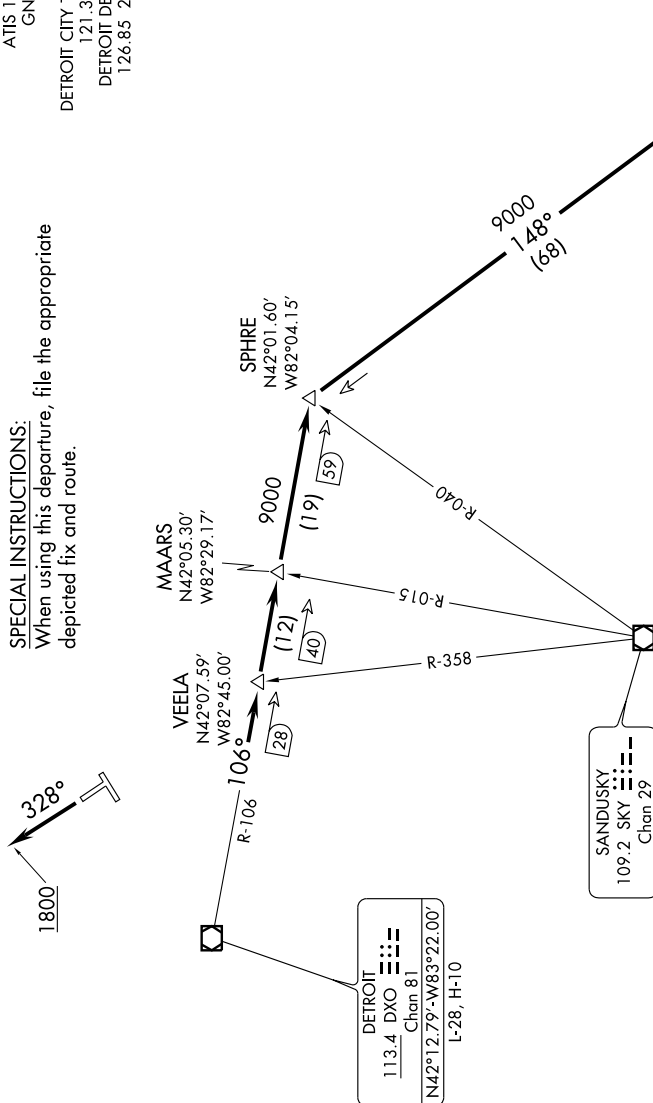
AKRON TWO DEPARTURE

DETROIT/ COLEMAN A. YOUNG MUNI (DET)
SL-118 (FAA)

DETROIT, MICHIGAN

ATIS 124.875
GND CON 121.85
DETROIT CITY TOWER 121.3 257.8
DETROIT DEP CON 126.85 239.275

SPECIAL INSTRUCTIONS:
When using this departure, file the appropriate depicted fix and route.



TAKE-OFF MINIMUMS

Rwys 7, 15, 33: STANDARD.

Rwy 25: 300-2 or STANDARD with minimum climb of 211 feet per NM to 1400, or alternatively, with Standard takeoff minimums and a normal 200 ft/NM climb gradient, takeoff must occur no later than 1,500 ft prior to departure end of runway.

NOTE: Radar Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RWY 33: Climb heading 328° to 1800 before turning, expect radar vectors, thence. . . .

TAKE-OFF ALL OTHER RUNWAYS: Climb via assigned heading for radar vectors, thence. . . .

. . . .to intercept DXO VOR/DME R-106 to SPHRE INT, then via ACO R-329 to ACO VOR/DME. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES

- Rwy 7: Multiple Trees beginning 232' from DER, 20' left of centerline, up to 60' AGL/687' MSL.
 Multiple Trees beginning 283' from DER, 44' right of centerline, up to 56' AGL/680' MSL.
 Stack 533' from DER, 66' right of centerline, 50' AGL/671' MSL.
 OL on Stack on Bldg 566' from DER, 18' right of centerline, 50' AGL/671' MSL.
 OL on Floodlight 622' from DER, 104' left of centerline, 41' AGL/668' MSL.
 Light Standard 149' from DER, 138' left of centerline, 37' AGL/654' MSL.
 Light Standard 227' from DER, 105' right of centerline, 33' AGL/654' MSL.
 Antenna on Bldg 936' from DER, 84' right of centerline, 43' AGL/670' MSL.
 OL on Floodlight 909' from DER, 96' right of centerline, 41' AGL/668' MSL.
 Pole 466' from DER, 198' right of centerline, 30' AGL/654' MSL.
 OL on Pole 132' from DER, on centerline, 16' AGL/637' MSL.
- Rwy 15: Multiple Trees beginning 589' from DER, 221' left of centerline, up to 69' AGL/683' MSL.
 Multiple Trees beginning 299' from DER, 289' right of centerline, up to 52' AGL/679' MSL.
 Ant on APBN 662' from DER, 667' left of centerline, 81' AGL/695' MSL.
 Pipe on Bldg 783' from DER, 597' left of centerline, 62' AGL/676' MSL.
 OL on Bldg 1473' from DER, 556' right of centerline, 68' AGL/692' MSL.
 Tower 3,376' from DER, 1,118' right of centerline, 103' AGL/723' MSL.
 Antenna on Bldg 803' from DER, 522' right of centerline, 35' AGL/656' MSL.
 Building 3,749' from DER, 569' left of centerline, 114' AGL/723' MSL.
 Floodlight on Bldg 1,611' from DER, 657' left of centerline, 53' AGL/667' MSL.
 Rod on OL Building 450' from DER, 317' left of centerline, 20' AGL/637' MSL.
- Rwy 25: Tower 2,828' from DER, 1,225' left of centerline, 141' AGL/770' MSL.
 Multiple Trees beginning 909' from DER, 133' left of centerline, up to 76' AGL/703' MSL.
 Multiple Trees beginning 334' from DER, 132' right of centerline, 58' AGL/685' MSL.
 OL on Building 48' from DER, 240' left of centerline, 41' AGL/662' MSL.
 Railroad 1' from DER, 126' left of centerline, 29' AGL/650' MSL.
 OL on Stack 454' from DER, 45' left of centerline, 35' AGL/659' MSL.
 Railroad 190' from DER, 40' left of centerline, 29' AGL/650' MSL.
 OL Stack on Bldg 949' from DER, 44' left of centerline, 41' AGL/668' MSL.
 Stack 958' from DER, 12' left of centerline, 41' AGL/668' MSL.
 Light Standard 701' from DER, 145' right of centerline, 26' AGL/653' MSL.
 Stack 9,474' from DER, 2,415' left of centerline, 241' AGL/872' MSL.
- Rwy 33: Multiple Trees beginning 113' from DER, 118' left of centerline, up to 73' AGL/694' MSL.
 Multiple Trees beginning 572' from DER, 84' right of centerline, up to 92' AGL/709' MSL.
 Flag Pole 963' from DER, 379' left of centerline, 28' AGL/658' MSL.



DEPARTURE ROUTE DESCRIPTION



TAKE-OFF RWY 33: Climb heading 328° to 1800 expect radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF ALL OTHER RUNWAYS: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

CHARDON TRANSITION (ERRTH2.CXR): From over ERRTH INT via CXR R-325 to CXR VOR/DME.

KEATING TRANSITION (ERRTH2.ETG): From over ERRTH INT via CXR R-325 to CXR VOR/DME, then via CXR R-102 and ETG R-289 to MIGET INT, then via ETG R-289 to ETG VORTAC.

SLATE RUN TRANSITION (ERRTH2.SLT): (DME Required) From over ERRTH INT via YQG R-101 to TRACE INT, then via ECK R-139 to DORET INT, then via SLT R-287 to SLT VORTAC.

TAKE-OFF OBSTACLES:

Rwy 7: Multiple trees beginning 232' from DER, 20' left of centerline, up to 60' AGL/687' MSL.

Multiple trees beginning 283' from DER, 44' right of centerline, up to 56' AGL/680' MSL.

Stack 533' from DER, 66' right of centerline, 50' AGL/671' MSL.

OL on stack on Bldg 566' from DER, 18' right of centerline, 50' AGL/671' MSL.

OL on floodlight 622' from DER, 104' left of centerline, 41' AGL/668' MSL.

Light standard 149' from DER, 138' left of centerline, 37' AGL/654' MSL.

Light standard 227' from DER, 105' right of centerline, 33' AGL/654' MSL.

Antenna on bldg 936' from DER, 84' right of centerline, 43' AGL/670' MSL.

OL on floodlight 909' from DER, 96' right of centerline, 41' AGL/668' MSL.

Pole 466' from DER, 198' right of centerline, 30' AGL/654' MSL.

OL on pole 132' from DER, on centerline, 16' AGL/637' MSL.

Rwy 15: Multiple trees beginning 589' from DER, 221' left of centerline, up to 69' AGL/683' MSL.

Multiple trees beginning 299' from DER, 289' right of centerline, up to 52' AGL/679' MSL.

Ant on APBN 662' from DER, 667' left of centerline, 81' AGL/695' MSL.

Pipe on OL bldg 783' from DER, 597' left of centerline, 62' AGL/676' MSL.

OL on bldg 1,473' from DER, 556' right of centerline, 68' AGL/692' MSL.

Tower 3,376' from DER, 1,118' right of centerline, 103' AGL/723' MSL.

Antenna on bldg 803' from DER, 522' right of centerline, 35' AGL/656' MSL.

Building 3,749' from DER, 569' left of centerline, 114' AGL/723' MSL.

Floodlight on bldg 1,611' from DER, 657' left of centerline, 53' AGL/667' MSL.

Rod on OL building 450' from DER, 317' left of centerline, 20' AGL/637' MSL.

Rwy 25: Tower 2,828' from DER, 1,225' left of centerline, 141' AGL/770' MSL.

Multiple trees beginning 909' from DER, 133' left of centerline, up to 76' AGL/703' MSL.

Multiple trees beginning 334' from DER, 132' right of centerline, 58' AGL/685' MSL.

OL on building 48' from DER, 240' left of centerline, 41' AGL/662' MSL.

Railroad 1' from DER, 126' left of centerline, 29' AGL/650' MSL.

OL on stack 454' from DER, 45' left of centerline, 35' AGL/659' MSL.

Railroad 190' from DER, 40' left of centerline, 29' AGL/650' MSL.

OL stack on Bldg 949' from DER, 44' left of centerline, 41' AGL/668' MSL.

Stack 958' from DER, 12' left of centerline, 41' AGL/668' MSL.

Light standard 701' from DER, 145' right of centerline, 26' AGL/653' MSL.

Stack 9,474' from DER, 2,415' left of centerline, 241' AGL/872' MSL.

Rwy 33: Multiple trees beginning 113' from DER, 118' left of centerline, up to 73' AGL/694' MSL.

Multiple trees beginning 572' from DER, 84' right of centerline, up to 92' AGL/709' MSL.

Flag pole 963' from DER, 379' left of centerline, 28' AGL/658' MSL.

FORT WAYNE THREE DEPARTURE

DETROIT/ COLEMAN A. YOUNG MUNI (DET)
SL-118 (FAA)

DETROIT, MICHIGAN

ATIS 124.875
GND CON
121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
126.85 239.275

DETROIT
113.4 DXO
Chan 81
N42°12.79'-W83°22.00'
L-28, H-10

1800

328°

SPECIAL INSTRUCTIONS:

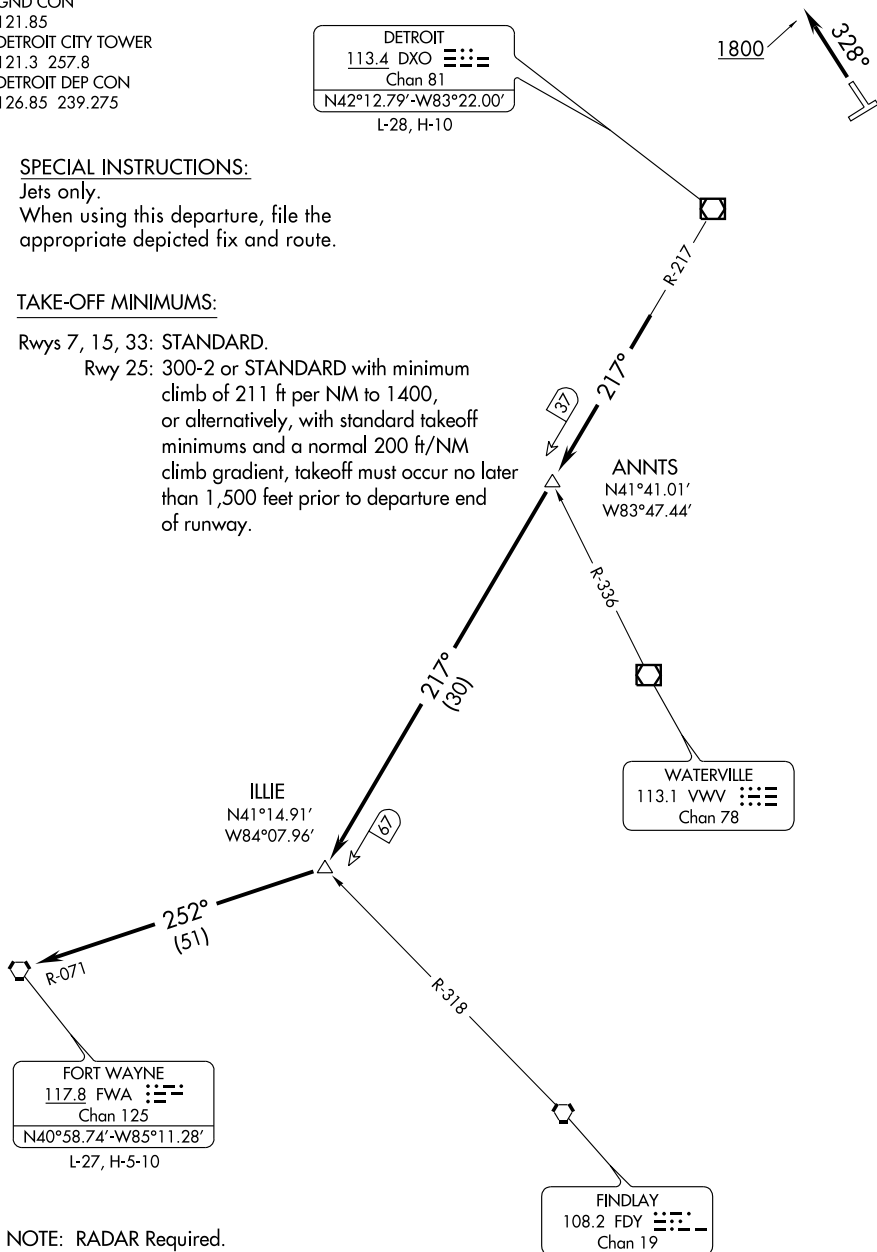
Jets only.

When using this departure, file the appropriate depicted fix and route.

TAKE-OFF MINIMUMS:

Rwys 7, 15, 33: STANDARD.

Rwy 25: 300-2 or STANDARD with minimum climb of 211 ft per NM to 1400, or alternatively, with standard takeoff minimums and a normal 200 ft/NM climb gradient, takeoff must occur no later than 1,500 feet prior to departure end of runway.



NOTE: RADAR Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 33: Climb via heading 328° to 1800 before turning, expect radar vectors, thence. . . .

TAKE-OFF ALL OTHER RUNWAYS: Climb via assigned heading for radar vectors, thence. . . .

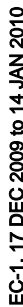
. . . .to intercept DXO VOR/DME R-217 to ILLIE INT, then via FWA R-071 to FWA VORTAC. Maintain 3000, expect clearance to filed flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

- Rwy 7: Multiple trees beginning 232' from DER, 20' left of centerline, up to 60' AGL/687' MSL.
Multiple trees beginning 283' from DER, 44' right of centerline, up to 56' AGL/680' MSL.
Stack 533' from DER, 66' right of centerline, 50' AGL/671' MSL.
OL on stack on bldg 566' from DER, 18' right of centerline, 50' AGL/671' MSL.
OL on floodlight 622' from DER, 104' left of centerline, 41' AGL/668' MSL.
Light standard 149' from DER, 138' left of centerline, 37' AGL/654' MSL.
Light standard 227' from DER, 105' right of centerline, 33' AGL/654' MSL.
Antenna on bldg 936' from DER, 84' right of centerline, 43' AGL/670' MSL.
OL floodlight 909' from DER, 96' right of centerline, 41' AGL/668' MSL.
Pole 466' from DER, 198' right of centerline, 30' AGL/654' MSL.
OL on pole 132' from DER, on centerline, 16' AGL/637' MSL.
- Rwy 15: Multiple trees beginning 589' from DER, 221' left of centerline up to 69' AGL/683' MSL.
Multiple trees beginning 299' from DER, 289' right of centerline, up to 52' AGL/679' MSL.
Ant on APBN 662' from DER, 667' left of centerline, 81' AGL/695' MSL.
Pipe on OL Bldg 783' from DER, 597' left of centerline, 62' AGL/676' MSL.
OL on bldg 1,473' from DER, 556' right of centerline, 68' AGL/692' MSL.
Tower 3,376' from DER, 1,118' right of centerline, 103' AGL/723' MSL.
Antenna on Bldg 803' from DER, 522' right of centerline, 35' AGL/656' MSL.
Building 3,749' from DER, 569' left of centerline, 114' AGL/723' MSL.
Floodlight on Bldg 1,611' from DER, 657' left of centerline, 53' AGL/667' MSL.
Rod on OL building 450' from DER, 317' left of centerline, 20' AGL/637' MSL.
- Rwy 25: Tower 2,828' from DER, 1,225' left of centerline, 141' AGL/770' MSL.
Multiple trees beginning 909' from DER, 133' left of centerline, up to 76' AGL/703' MSL.
Multiple trees beginning 334' from DER, 132' right of centerline, 58' AGL/685' MSL.
OL on building 48' from DER, 240' left of centerline, 41' AGL/662' MSL.
Railroad 1' from DER, 126' left of centerline, 29' AGL/650' MSL.
OL on stack 454' from DER, 45' left of centerline, 35' AGL/659' MSL.
Railroad 190' from DER, 40' left of centerline, 29' AGL/650' MSL.
OL stack on Bldg 949' from DER, 44' left of centerline, 41' AGL/668' MSL.
Stack 958' from DER, 12' left of centerline, 41' AGL/668' MSL.
Light standard 701' from DER, 145' right of centerline, 26' AGL/653' MSL.
Stack 9,474' from DER, 2,415' left of centerline, 241' AGL/872' MSL.
- Rwy 33: Multiple trees beginning 113' from DER, 118' left of centerline, up to 73' AGL/694' MSL.
Multiple trees beginning 572' from DER, 84' right of centerline, up to 92' AGL/709' MSL.
Flag pole 963' from DER, 379' left of centerline, 28' AGL/658' MSL.

LONDON TRANSITION (YXU GOHMA1): From over YXU VORTAC via YXU R-260 to RCADE INT, then via YQG R-030 to GOHMA INT. Thence

. . . . From GOHMA, expect radar vectors to final approach course.



NOTE: RADAR Required.

NOTE: Chart not to scale.

LOC I-VQM <u>111.3</u>	APP CRS 328°	Rwy Idg 5090 TDZE 624 Apt Elev 626
----------------------------------	------------------------	---

ILS or LOC RWY 33
DETROIT/COLEMAN A. YOUNG MUNI (DET)

T	Inoperative table does not apply.
A	

MISSED APPROACH: Climb to 3000 via YQG R-326 to DELOW Int and hold.

ATIS
124.875

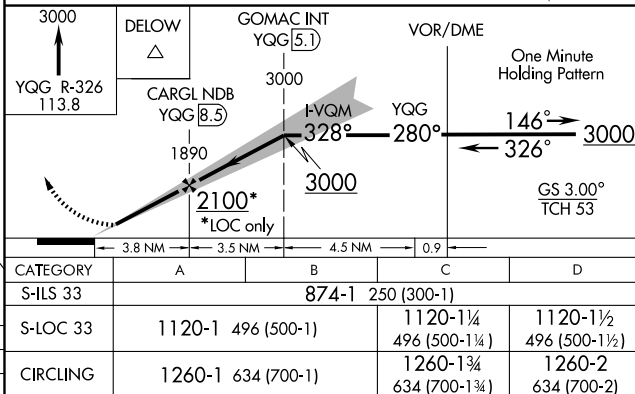
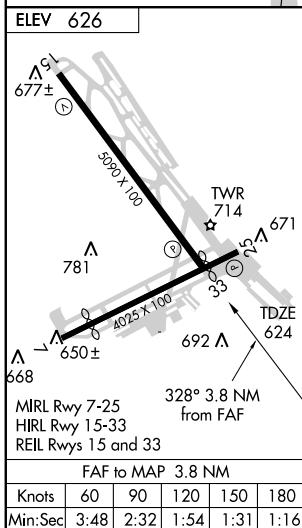
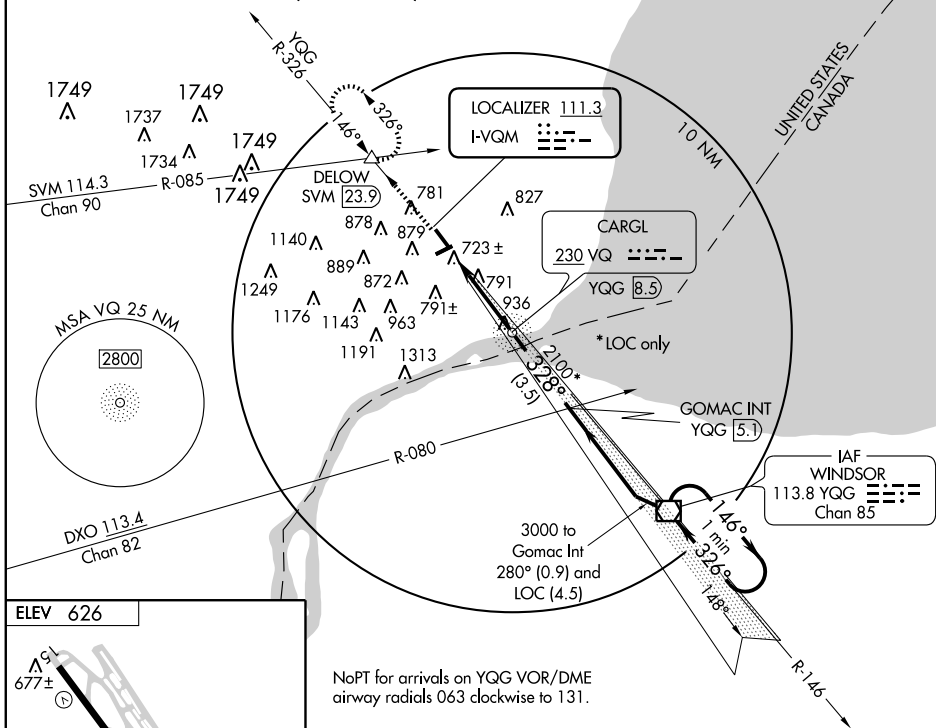
DETROIT APP CON
126.85 363.2

DETROIT CITY TOWER
121.3 257.8

GND CON
121.85

UNICOM
122.95

ADF, RADAR, or DME REQUIRED



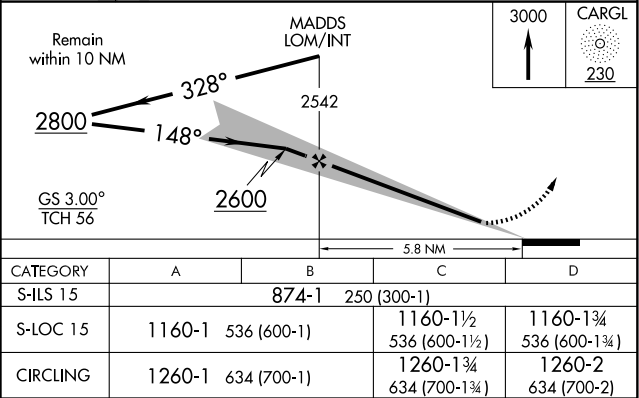
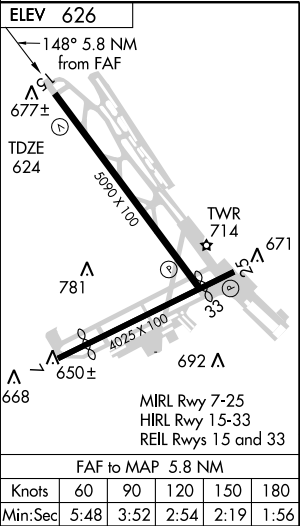
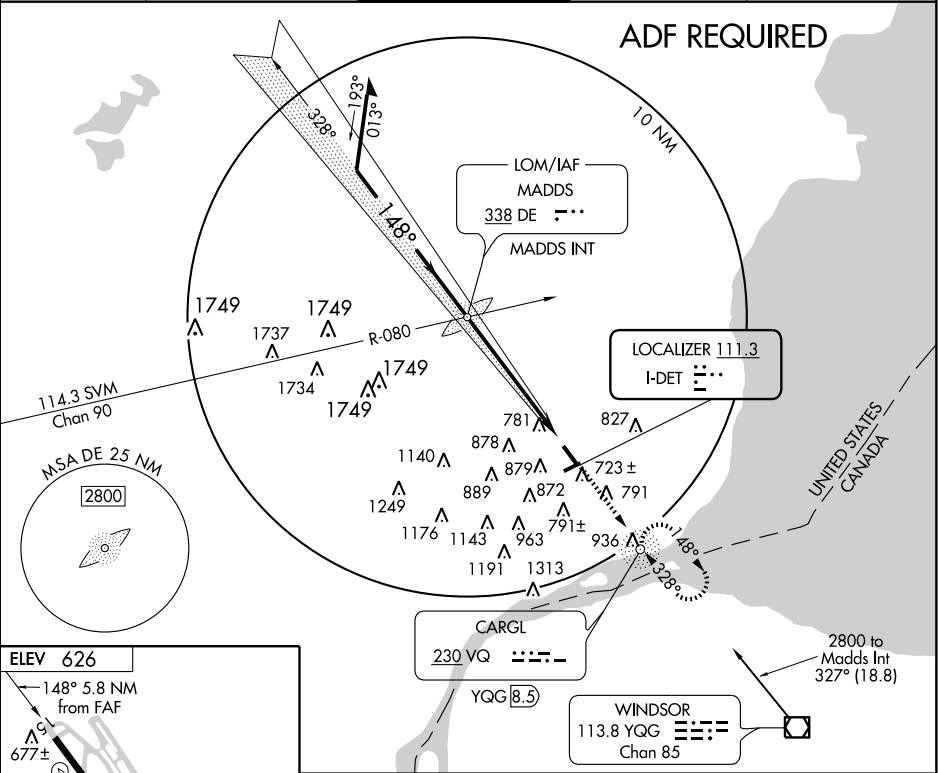
ILS RWY 15

DETROIT/ COLEMAN A. YOUNG MUNI (DET)

LOC I-DET	APP CRS	Rwy Idg	5090
111.3	148°	TDZE	624
		Apt Elev	626

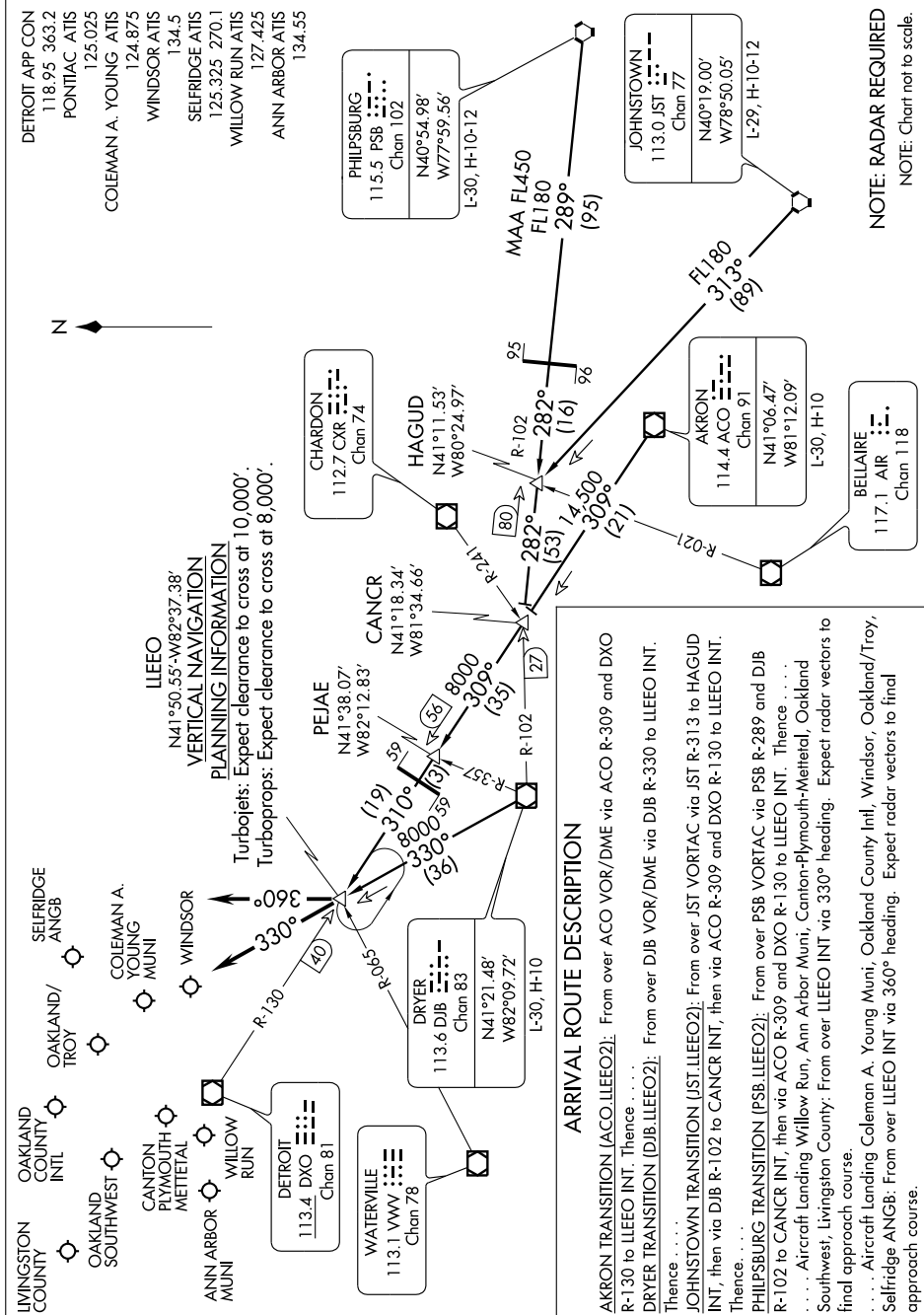
<div>Inoperative table does not apply. Air carrier landing visibility reduction for local conditions not authorized.</div>	MISSED APPROACH: Climb to 3000 direct Cargl NDB/YQG 8.5 DME and hold.
--	---

ATIS 124.875	DETROIT APP CON 126.85 363.2	DETROIT CITY TOWER 121.3 257.8	GND CON 121.85	UNICOM 122.95
-----------------	---------------------------------	-----------------------------------	-------------------	------------------



LLEEO TWO ARRIVAL

DETROIT, MICHIGAN



MOONN TWO DEPARTURE

SL-118 (FAA)

DETROIT, MICHIGAN

NOTE: Chart not to scale.

SPECIAL INSTRUCTIONS:

When using this departure, file the appropriate depicted fix and route. London Transition for use by Props Only.

TAKE-OFF MINIMUMS:

RWYS 7, 15, 33: STANDARD.

Rwy 25: 300-2 or Standard with minimum climb of 211 ft per NM to 1400, or alternatively, with standard takeoff minimums and a normal 200 ft/NM climb gradient, takeoff must occur no later than 1,500 ft prior to departure end of runway.

NOTE: RADAR Required.

(NARRATIVE ON FOLLOWING PAGE)

EC-1 17 DEC 2009 to 14 JAN 2010



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RWY 33: Climb heading 328° to 1800' before turning expect radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF ALL OTHER RUNWAYS: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

DUNKIRK TRANSITION (MOONN2.DKK): From over MOONN INT via SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to BEWEL INT, then via DKK R-267 to DKK VORTAC.

JAMESTOWN TRANSITION (MOONN2.JHW): From over MOONN INT via SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to BEWEL INT, then via JHW R-282 to JHW VOR/DME.

LONDON TRANSITION (MOONN2.YXU): From over MOONN INT via SVM R-095 to BROKK INT, then via YXU R-212 to YXU VORTAC.

TAKE-OFF OBSTACLES

- Rwy 7:** Multiple trees beginning 232' from DER, 20' left of centerline, up to 60' AGL/687' MSL.
Multiple trees beginning 283' from DER, 44' right of centerline, up to 56' AGL/680' MSL.
Stack 533' from DER, 66' right of centerline, 50' AGL/671' MSL.
OL on stack on Bldg 566' from DER, 18' right of centerline, 50' AGL/671' MSL.
OL on floodlight 622' from DER, 104' left of centerline, 41' AGL/668' MSL.
Light standard 149' from DER, 138' left of centerline, 37' AGL/654' MSL.
Light standard 227' from DER, 105 right of centerline, 33' AGL/654' MSL.
Antenna on Bldg 936' from DER, 84' right of centerline, 43' AGL/670' MSL.
OL floodlight 909' from DER, 96' right of centerline, 41' AGL/668' MSL.
Pole 466' from DER, 198' right of centerline, 30' AGL/654' MSL.
OL on pole 132' from DER, on centerline, 16' AGL/637' MSL.
- Rwy 15:** Multiple trees beginning 589' from DER, 221' left of centerline up to 69' AGL/683' MSL.
Multiple trees beginning 299' from DER, 289' right of centerline, up to 52' AGL/679' MSL.
Ant on APBN 662' from DER, 667' left of centerline, 81' AGL/695' MSL.
Pipe on OL Bldg 783' from DER, 597' left of centerline, 62' AGL/676' MSL.
OL on Bldg 1,473' from DER, 556' right of centerline, 68' AGL/692' MSL.
Tower 3,376' from DER, 1,118' right of centerline, 103' AGL/723' MSL.
Antenna on Bldg 803' from DER, 522' right of centerline, 35' AGL/656' MSL.
Building 3,749' from DER, 569' left of centerline, 114' AGL/723' MSL.
Floodlight on Bldg 1,611' from DER 657' left of centerline, 53' AGL/667' MSL.
Rod on OL building 450' from DER, 317' left of centerline, 20' AGL/637' MSL.
- Rwy 25:** Tower 2,828' from DER, 1,225' left of centerline, 141' AGL/770' MSL.
Multiple trees beginning 909' from DER, 133' left of centerline, up to 76' AGL/703' MSL.
Multiple trees beginning 334' from DER, 132' right of centerline, 58' AGL/685' MSL.
OL on building 48' from DER, 240' left of centerline, 41' AGL/662' MSL.
Railroad 1' from DER, 126' left of centerline, 29' AGL/650' MSL.
OL on stack 454' from DER, 45' left of centerline, 35' AGL/659' MSL.
Railroad 190' from DER, 40' left of centerline, 29' AGL/650' MSL.
OL stack on Bldg 949' from DER, 44' left of centerline, 41' AGL/668' MSL.
Stack 958' from DER, 12' left of centerline, 41' AGL/668' MSL.
Light standard 701' from DER, 145' right of centerline, 26' AGL/653' MSL.
Stack 9,474 from DER, 2,415' left of centerline, 241' AGL/872' MSL.
- Rwy 33:** Multiple trees beginning 113' from DER, 118' left of centerline, up to 73' AGL/694' MSL.
Multiple trees beginning 572' from DER, 84' right of centerline, up to 92' AGL/709' MSL.
Flag pole 963' from DER, 379' left of centerline, 28' AGL/658' MSL.

NDB RWY 15

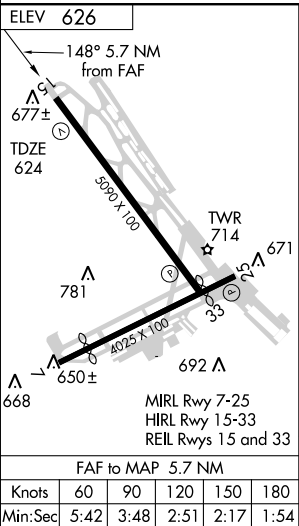
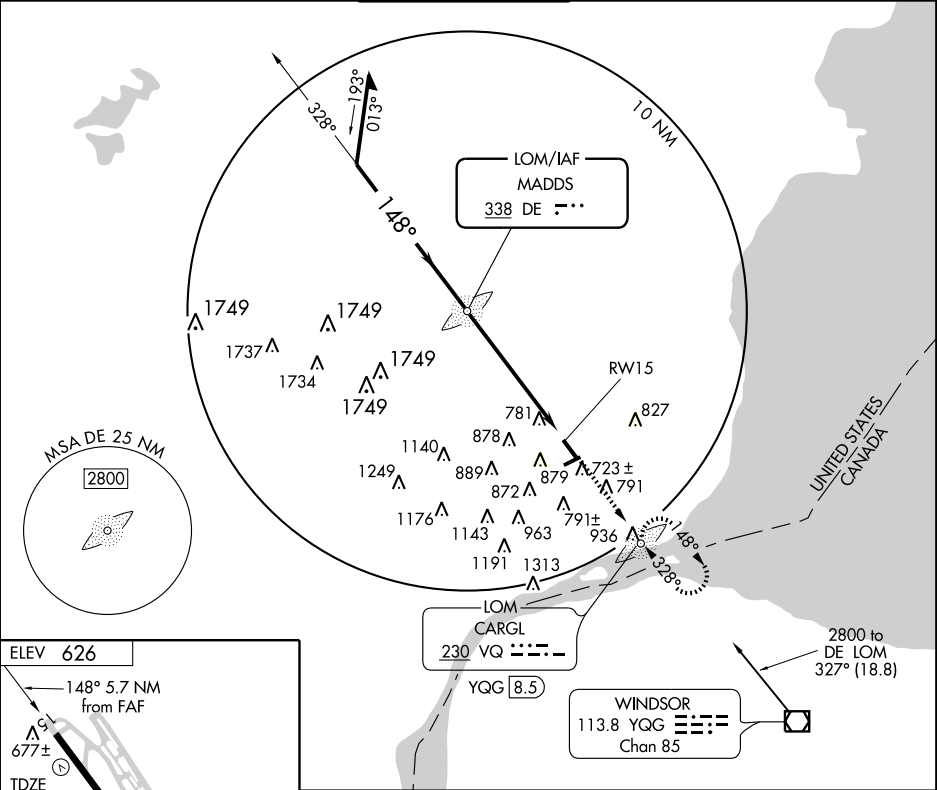
DETROIT/ COLEMAN A. YOUNG MUNI (DET)

LOM DE	APP CRS	Rwy Idg	5090
338	148°	TDZE	624
		Apt Elev	626

Visibility reduction by helicopters NA.
When local altimeter setting not received, use Detroit Metro Wayne County altimeter setting and increase all MDA 60 feet and increase S-15 Cat C and D visibility ¼ mile, and Circling Cat C ¼ mile.

MISSED APPROACH: Climb to 3000 direct VQ LOM/YQG 8.5 DME and hold, continue climb in hold to 3000.

ATIS	DETROIT APP CON	DETROIT CITY TOWER	GND CON	UNICOM
124.875	126.85 363.2	121.3 257.8	121.85	122.95



Remain within 10 NM		MADDS LOM	3000	VQ
2800		328°	↑	230
2600		148°		
		3.15° TCH 57		
		5.7 NM		
		RW15		
CATEGORY	A	B	C	D
S-15	1220-1 596 (600-1)	1220-1½ 596 (600-1½)	1220-1¾ 596 (600-1¾)	1220-2 596 (600-2)
CIRCLING	1220-1 594 (600-1)	1220-1½ 594 (600-1½)	1220-2 594 (600-2)	1220-2 594 (600-2)



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF MINIMUMS:

Rwy 7, 15, 33: STANDARD.

Rwy 25: 300-2 or STANDARD with minimum climb of 211 ft per NM to 1400, or alternatively, with standard takeoff minimums and a normal 200 ft/NM climb gradient, takeoff must occur no later than 1,500 ft prior to departure end of runway.

SPECIAL INSTRUCTIONS:

When using this departure, file the appropriate depicted departure fix and route. Aircraft landing/overflying Lansing (LAN) or overflying Flint (FNT) at 10,000 feet or below, file via EARVN. Aircraft landing Flint (FNT) at 10,000 feet or below, file via LAYNE. Aircraft over HARWL must file FL220 and below.

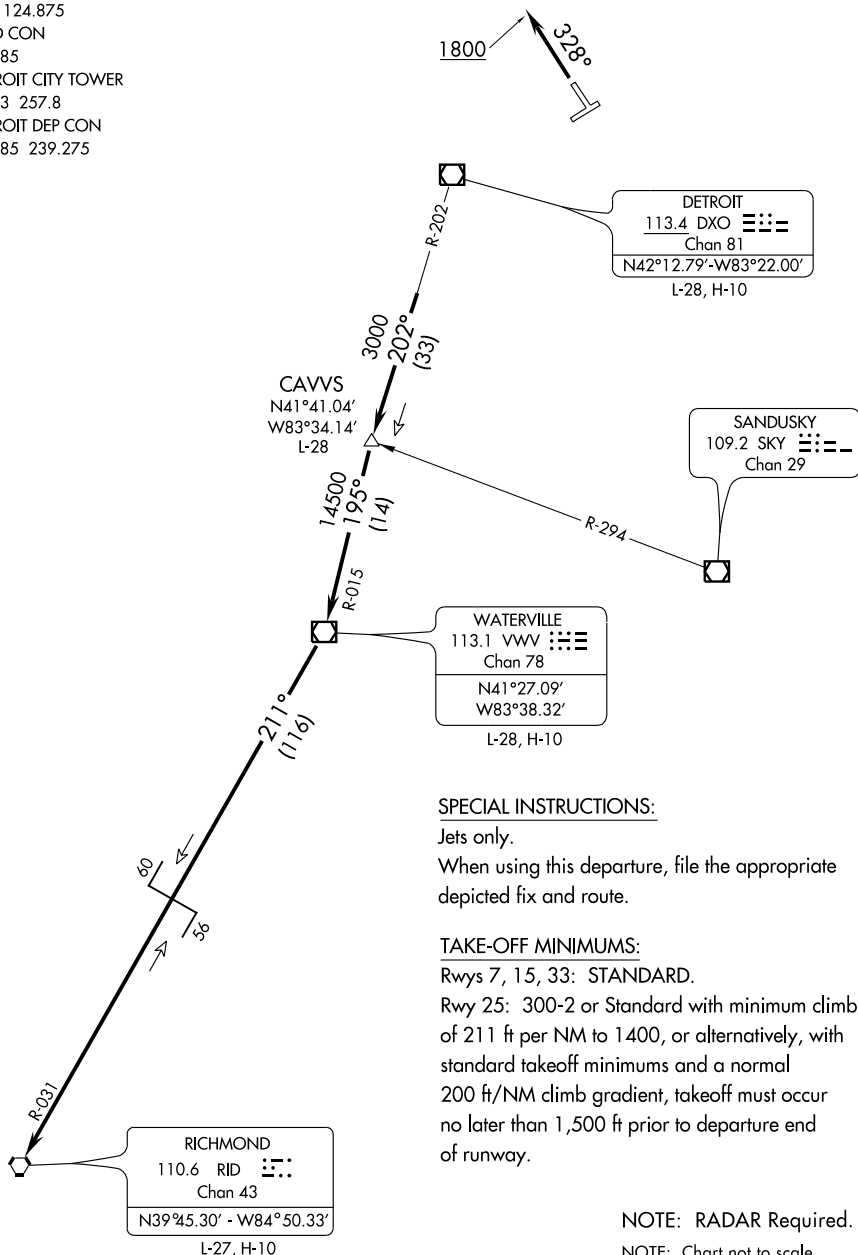
TAKE-OFF RWY 33: Climb heading 328° to 1800 before turning, expect radar vectors to join assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF ALL OTHER RUNWAYS: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

- Rwy 7: Multiple trees beginning 232' from DER, 20' left of centerline, up to 60' AGL/687' MSL.
Multiple trees beginning 283' from DER, 44' right of centerline, up to 56' AGL/680' MSL.
Stack 533' from DER, 66' right of centerline, 50' AGL/671' MSL.
OL on stack on Bldg 566' from DER, 18' right of centerline, 50' AGL/671' MSL.
OL on floodlight 622' from DER, 104' left of centerline, 41' AGL/668' MSL.
Light standard 149' from DER, 138' left of centerline, 37' AGL/654' MSL.
Light standard 227' from DER, 105' right of centerline, 33' AGL/654' MSL.
Antenna on Bldg 936' from DER, 84' right of centerline, 43' AGL/670' MSL.
OL floodlight 909' from DER, 96' right of centerline, 41' AGL/668' MSL.
Pole 466' from DER, 198' right of centerline, 30' AGL/654' MSL.
OL on pole 132' from DER, on centerline, 16' AGL/637' MSL.
- Rwy 15: Multiple trees beginning 589' from DER, 221' left of centerline up to 69' AGL/683' MSL.
Multiple trees beginning 299' from DER, 289' right of centerline, up to 52' AGL/679' MSL.
Ant on APBN 662' from DER, 667' left of centerline, 81' AGL/695' MSL.
Pipe on OL Bldg 783' from DER, 597' left of centerline, 62' AGL/676' MSL.
OL on Bldg 1,473' from DER, 556' right of centerline, 68' AGL/692' MSL.
Tower 3,376' from DER, 1,118' right of centerline, 103' AGL/723' MSL.
Antenna on Bldg 803' from DER, 522' right of centerline, 35' AGL/656' MSL.
Building 3,749' from DER, 569' left of centerline, 114' AGL/723' MSL.
Floodlight on Bldg 1,611' from DER, 657' left of centerline, 53' AGL/667' MSL.
Rod on OL building 450' from DER, 317' left of centerline, 20' AGL/637' MSL.
- Rwy 25: Tower 2,828' from DER, 1,225' left of centerline, 141' AGL/770' MSL.
Multiple trees beginning 909' from DER, 133' left of centerline, up to 76' AGL/703' MSL.
Multiple trees beginning 334' from DER, 132' right of centerline, 58' AGL/685' MSL.
OL on building 48' from DER, 240' left of centerline, 41' AGL/662' MSL.
Railroad 1' from DER, 126' left of centerline, 29' AGL/650' MSL.
OL on stack 454' from DER, 45' left of centerline, 35' AGL/659' MSL.
Railroad 190' from DER, 40' left of centerline, 29' AGL/650' MSL.
OL stack on Bldg 949' from DER, 44' left of centerline, 41' AGL/668' MSL.
Stack 958' from DER, 12' left of centerline, 41' AGL/668' MSL.
Light standard 701' from DER, 145' right of centerline, 26' AGL/653' MSL.
Stack 9,474' from DER, 2,415' left of centerline, 241' AGL/872' MSL.
- Rwy 33: Multiple trees beginning 113' from DER, 118' left of centerline, up to 73' AGL/694' MSL.
Multiple trees beginning 572' from DER, 84' right of centerline, up to 92' AGL/709' MSL.
Flag pole 963' from DER, 379' left of centerline, 28' AGL/658' MSL.

ATIS 124.875
GND CON
121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
126.85 239.275



(NARRATIVE ON FOLLOWING PAGE)



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RWY 33: Climb via heading 328° to 1800 before turning, expect radar vectors, thence

TAKE OFF ALL OTHER RWYS: Climb via assigned heading for radar vectors thence

....To intercept DXO VOR/DME R-202 to CAVVS INT/DXO 33 DME, then via VWV R-015 to VWV VOR/DME. Then right turn via VWV R-211 and RID R-031 to RID VORTAC. Maintain 3,000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

- Rwy 7: Multiple trees beginning 232' from DER, 20' left of centerline, up to 60' AGL/687' MSL.
Multiple trees beginning 283' from DER, 44' right of centerline, up to 56' AGL/680' MSL.
Stack 533' from DER, 66' right of centerline, 50' AGL/671' MSL.
OL on stack on Bldg 566' from DER, 18' right of centerline, 50' AGL/671' MSL.
OL on floodlight 622' from DER, 104' left of centerline, 41' AGL/668' MSL.
Light standard 149' from DER, 138' left of centerline, 37' AGL/654' MSL.
Light standard 227' from DER, 105' right of centerline, 33' AGL/654' MSL.
Antenna on Bldg 936' from DER, 84' right of centerline, 43' AGL/670' MSL.
OL floodlight 909' from DER, 96' right of centerline, 41' AGL/668' MSL.
Pole 466' from DER, 198' right of centerline, 30' AGL/654' MSL.
OL on pole 132' from DER, on centerline, 16' AGL/637' MSL.
- Rwy 15: Multiple trees beginning 589' from DER, 221' left of centerline up to 69' AGL/683' MSL.
Multiple trees beginning 299' from DER, 289' right of centerline, up to 52' AGL/679' MSL.
Ant on APBN 662' from DER, 667' left of centerline, 81' AGL/695' MSL.
Pipe on OL Bldg 783' from DER, 597' left of centerline, 62' AGL/676' MSL.
OL on Bldg 1473' from DER, 556' right of centerline, 68' AGL/692' MSL.
Tower 3376' from DER, 1118' right of centerline, 103' AGL/723' MSL.
Antenna on Bldg 803' from DER, 522' right of centerline, 35' AGL/656' MSL.
Building 3749' from DER, 569' left of centerline, 114' AGL/723' MSL.
Floodlight on Bldg 1611' from DER, 657' left of centerline, 53' AGL/667' MSL.
Rod on OL building 450' from DER, 317' left of centerline, 20' AGL/637' MSL.
- Rwy 25: Tower 2828' from DER, 1225' left of centerline, 141' AGL/770' MSL.
Multiple trees beginning 909' from DER, 133' left of centerline, up to 76' AGL/703' MSL.
Multiple trees beginning 334' from DER, 132' right of centerline, 58' AGL/685' MSL.
OL on building 48' from DER, 240' left of centerline, 41' AGL/662' MSL.
Railroad 1' from DER, 126' left of centerline, 29' AGL/650' MSL.
OL on stack 454' from DER, 45' left of centerline, 35' AGL/659' MSL.
Railroad 190' from DER, 40' left of centerline, 29' AGL/650' MSL.
OL stack on Bldg 949' from DER, 44' left of centerline, 41' AGL/668' MSL.
Stack 958' from DER, 12' left of centerline, 41' AGL/668' MSL.
Light standard 701' from DER, 145' right of centerline, 26' AGL/653' MSL.
Stack 9474 from DER, 2415' left of centerline, 241' AGL/872' MSL.
- Rwy 33: Multiple trees beginning 113' from DER, 118' left of centerline, up to 73' AGL/694' MSL.
Multiple trees beginning 572' from DER, 84' right of centerline, up to 92' AGL/709' MSL.
Flag pole 963' from DER, 379' left of centerline, 28' AGL/658' MSL.

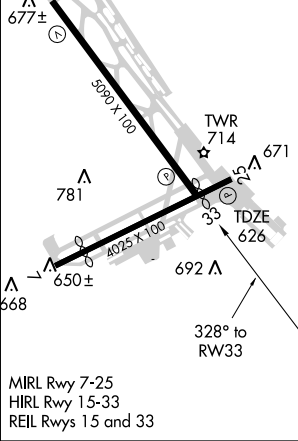
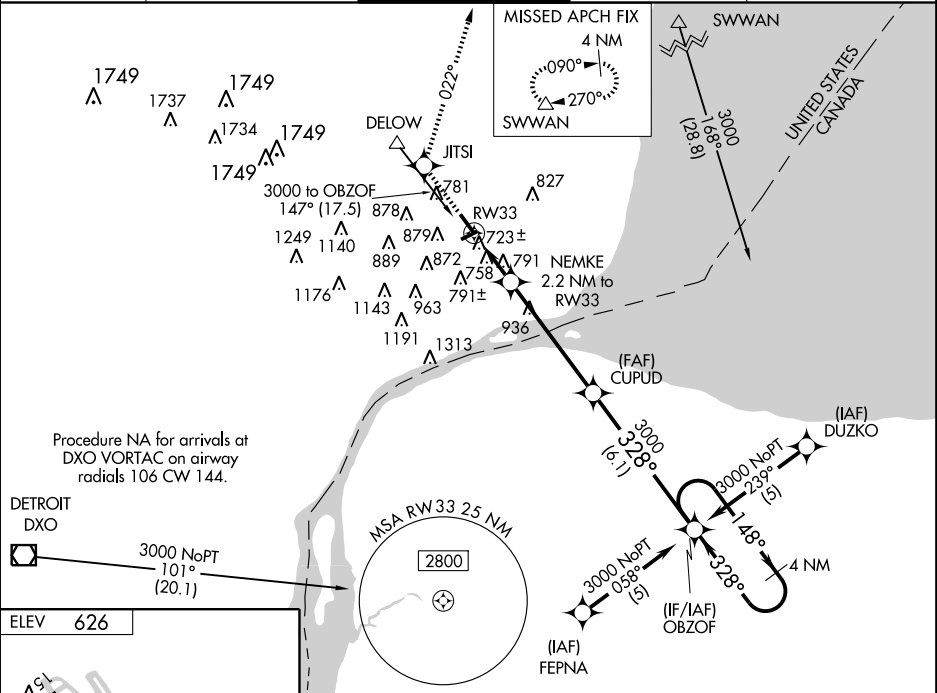
WAAS CH 58211 W33A	APP CRS 328°	Rwy Idg TDZE Apt Elev	5090 626 626
--	------------------------	-----------------------------	---

RNAV (GPS) RWY 33

DETROIT/ COLEMAN A. YOUNG MUNI (DET)

<p>▼ ▲</p> <p>For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 48°C (118°F). Visibility reduction by helicopters NA. When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase all DA 48 feet and all MDA 60 feet; increase visibility LPV all Cats, LNAV Cat C and D and Circling Cat C ¼ mile. DME/DME RNP-0.3 NA.</p>	<p>MISSED APPROACH: Climb to 4000 direct JITSI and via 022° track to SWWAN and hold.</p>
--	--

ATIS 124.875	DETROIT APP CON 126.85 363.2	DETROIT CITY TOWER 121.3 257.8	GND CON 121.85	UNICOM 122.95
------------------------	--	--	--------------------------	-------------------------



4000 ↑	JITSI ✦	TRK 022°	SWWAN △	CUPUD	OBZOF	4 NM Holding Pattern
*LNAV only						
NEMKE 2.2 NM to RW33				← 328°	→ 148°	3000
RW33				↖ 3000	← 328°	3000
*1380				GS 3.00° TCH 51		
← 2.2 NM				5 NM	6.1 NM	
CATEGORY	A		B	C	D	
LPV DA	936-1 310 (400-1)					
LNAV/ VNAV DA	1039-1½ 413 (500-1½)					
LNAV MDA	1100-1 474 (500-1)			1100-1¼ 474 (500-1¼)	1100-1½ 474 (500-1½)	
CIRCLING	1180-1 554 (600-1)			1180-1½ 554 (600-1½)	1200-2 574 (600-2)	

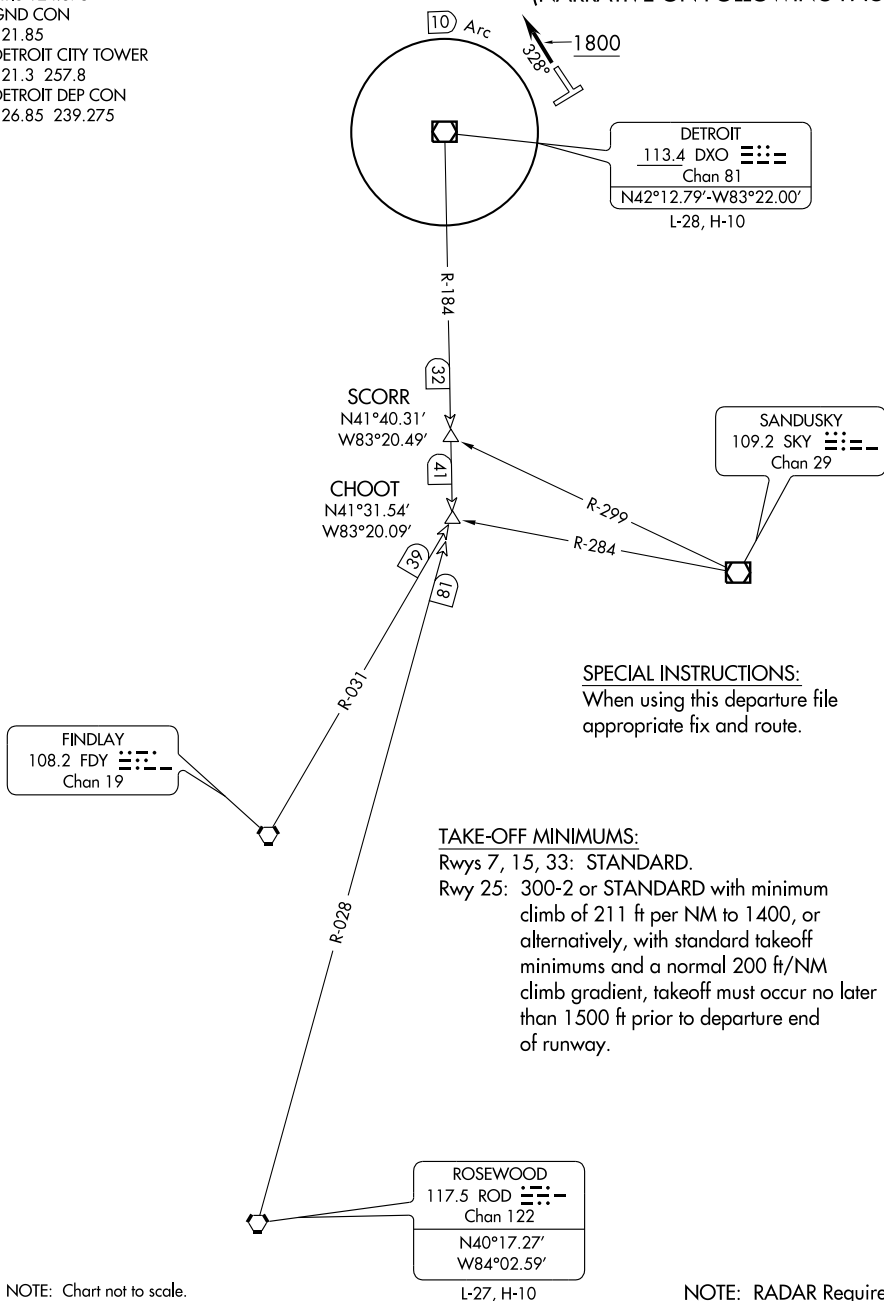
ROSEWOOD TWO DEPARTURE

SL-118 (FAA)

DETROIT, MICHIGAN

ATIS 124.875
GND CON
121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
126.85 239.275

(NARRATIVE ON FOLLOWING PAGE)





DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 33: Climb heading 328 to 1800 before turning expect vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF ALL OTHER RUNWAYS: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

- Rwy 7: Multiple trees beginning 232' from DER, 20' left of centerline, up to 60' AGL/687' MSL.
 Multiple trees beginning 283' from DER, 44' right of centerline, up to 56' AGL/680' MSL.
 Stack 533' from DER, 66' right of centerline, 50' AGL/671' MSL.
 OL on stack on Bldg 566' from DER, 18' right of centerline, 50' AGL/671' MSL.
 OL on floodlight 622' from DER, 104' left of centerline, 41' AGL/668' MSL.
 Light standard 149' from DER, 138' left of centerline, 37' AGL/654' MSL.
 Light standard 227' from DER, 105' right of centerline, 33' AGL/654' MSL.
 Antenna on Bldg 936' from DER, 84' right of centerline, 43' AGL/670' MSL.
 OL floodlight 909' from DER, 96' right of centerline, 41' AGL/668' MSL.
 Pole 466' from DER, 198' right of centerline, 30' AGL/654' MSL.
 OL on pole 132' from DER, on centerline, 16' AGL/637' MSL.
- Rwy 15: Multiple trees beginning 589' from DER, 221' left of centerline up to 69' AGL/683' MSL.
 Multiple trees beginning 299' from DER, 289' right of centerline, up to 52' AGL/679' MSL.
 Ant on APBN 662' from DER, 667' left of centerline, 81' AGL/695' MSL.
 Pipe on OL Bldg 783' from DER, 597' left of centerline, 62' AGL/676' MSL.
 OL on Bldg 1,473' from DER, 556' right of centerline, 68' AGL/692' MSL.
 Tower 3,376' from DER, 1,118' right of centerline, 103' AGL/723' MSL.
 Antenna on Bldg 803' from DER, 522' right of centerline, 35' AGL/656' MSL.
 Building 3,749' from DER, 569' left of centerline, 114' AGL/723' MSL.
 Floodlight on Bldg 1,611' from DER, 657' left of centerline, 53' AGL/667' MSL.
 Rod on OL building 450' from DER, 317' left of centerline, 20' AGL/637' MSL.
- Rwy 25: Tower 2,828' from DER, 1,225' left of centerline, 141' AGL/770' MSL.
 Multiple trees beginning 909' from DER, 133' left of centerline, up to 76' AGL/703' MSL.
 Multiple trees beginning 334' from DER, 132' right of centerline, 58' AGL/685' MSL.
 OL on building 48' from DER, 240' left of centerline, 41' AGL/662' MSL.
 Railroad 1' from DER, 126' left of centerline, 29' AGL/650' MSL.
 OL on stack 454' from DER, 45' left of centerline, 35' AGL/659' MSL.
 Railroad 190' from DER, 40' left of centerline, 29' AGL/650' MSL.
 OL stack on Bldg 949' from DER, 44' left of centerline, 41' AGL/668' MSL.
 Stack 958' from DER, 12' left of centerline, 41' AGL/668' MSL.
 Light standard 701' from DER, 145' right of centerline, 26' AGL/653' MSL.
 Stack 9,474 from DER, 2,415' left of centerline, 241' AGL/872' MSL.
- Rwy 33: Multiple trees beginning 113' from DER, 118' left of centerline, up to 73' AGL/694' MSL.
 Multiple trees beginning 572' from DER, 84' right of centerline, up to 92' AGL/709' MSL.
 Flag pole 963' from DER, 379' left of centerline, 28' AGL/658' MSL.

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON

127.5 239.275

WILLOW RUN ATIS 127.425

PONTIAC ATIS 125.025

COLEMAN A. YOUNG ATIS 124.875

WINDSOR ATIS 134.5

SELFREDGE ATIS 125.325 270.1

SPRTN

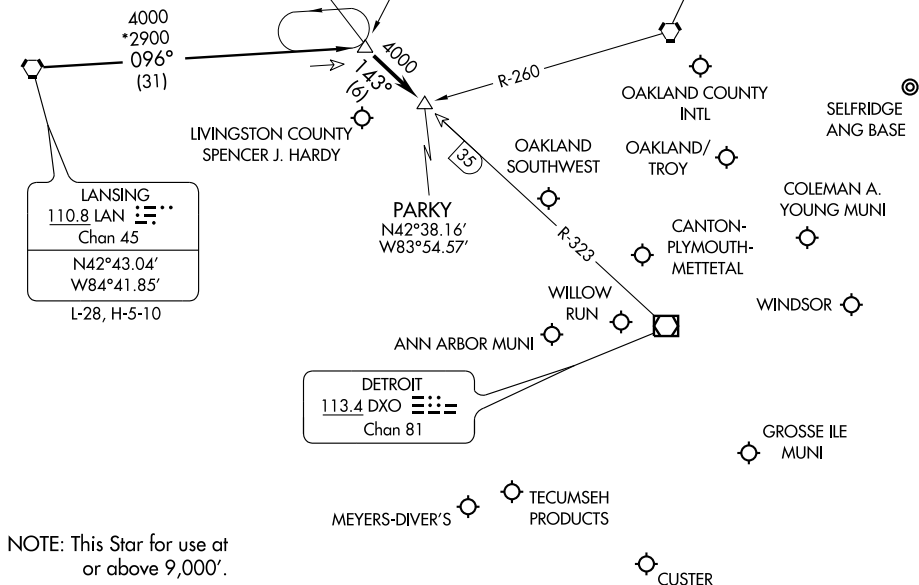
N42°42.52'-W84°00.23'

VERTICAL NAVIGATION

PLANNING INFORMATION

TURBOJETS/TURBOPROPS:

Expect clearance to cross at 9000'.



LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence

. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ,

1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence

. . . . Expect radar vectors to final approach course.

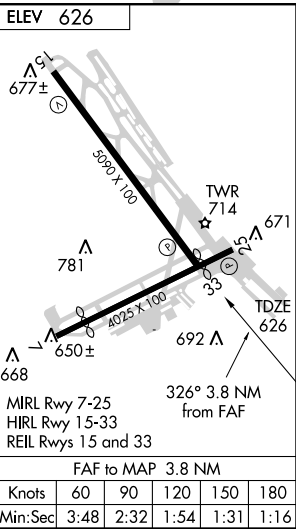
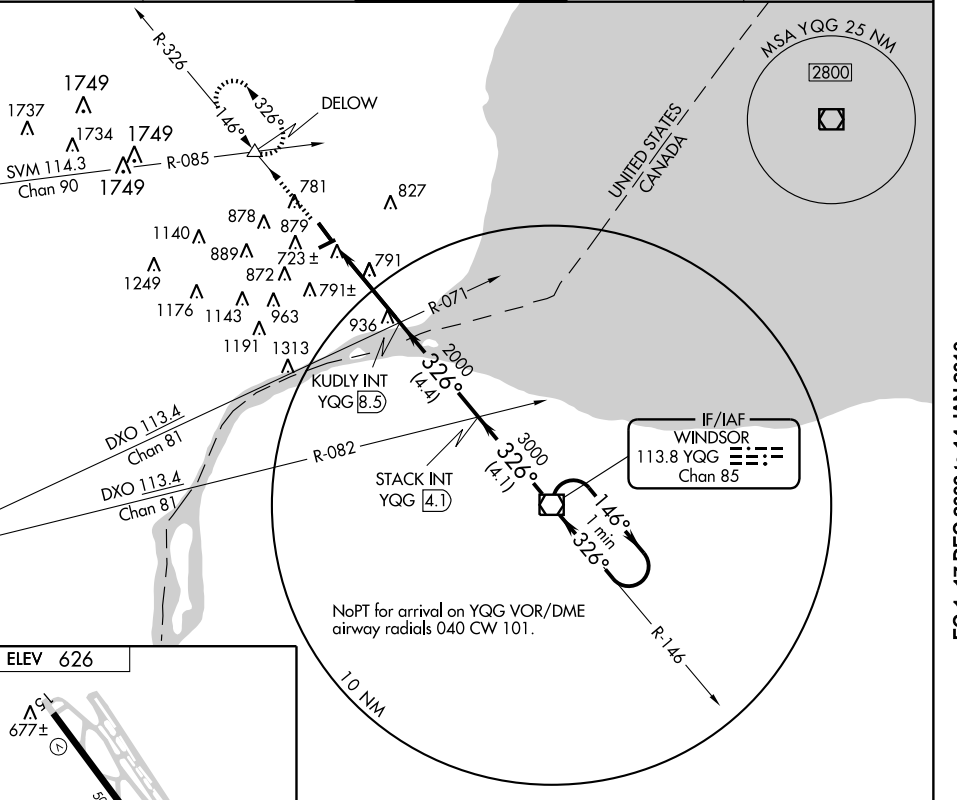
TAKE-OFF OBSTACLES:

- Rwy 7: Multiple Trees beginning 232' from DER, 20' left of centerline, up to 60' AGL/687' MSL.
 Multiple Trees beginning 283' from DER, 44' right of centerline, up to 56' AGL/680' MSL.
 Stack 533' from DER, 66' right of centerline, 50' AGL/671' MSL.
 OL on Stack on Bldg 566' from DER, 18' right of centerline, 50' AGL/671' MSL.
 OL on Floodlight 622' from DER, 104' left of centerline, 41' AGL/668' MSL.
 Light Standard 149' from DER, 138' left of centerline, 37' AGL/654' MSL.
 Light Standard 227' from DER, 105' right of centerline, 33' AGL/654' MSL.
 Antenna on Bldg 936' from DER, 84' right of centerline, 43' AGL/670' MSL.
 OL Floodlight 909' from DER, 96' right of centerline, 41' AGL/668' MSL.
 Pole 466' from DER, 198' right of centerline, 30' AGL/654' MSL.
 OL on Pole 132' from DER, on centerline, 16' AGL/637' MSL.
- Rwy 15: Multiple Trees beginning 589' from DER, 221' left of centerline up to 69' AGL/683' MSL.
 Multiple Trees beginning 299' from DER, 289' right of centerline, up to 52' AGL/679' MSL.
 Ant on APBN 662' from DER, 667' left of centerline, 81' AGL/695' MSL.
 Pipe on OL Bldg 783' from DER, 597' left of centerline, 62' AGL/676' MSL.
 OL on Bldg 1,473' from DER, 556' right of centerline, 68' AGL/692' MSL.
 Tower 3,376' from DER, 1,118' right of centerline, 103' AGL/723' MSL.
 Antenna on Bldg 803' from DER, 522' right of centerline, 35' AGL/656' MSL.
 Building 3,749' from DER, 569' left of centerline, 114' AGL/723' MSL.
 Floodlight on Bldg 1,611' from DER, 657' left of centerline, 53' AGL/667' MSL.
 Rod on OL Building 450' from DER, 317' left of centerline, 20' AGL/637' MSL.
- Rwy 25: Tower 2,828' from DER, 1,225' left of centerline, 141' AGL/770' MSL.
 Multiple Trees beginning 909' from DER, 133' left of centerline, up to 76' AGL/703' MSL.
 Multiple Trees beginning 334' from DER, 132' right of centerline, 58' AGL/685' MSL.
 OL on Building 48' from DER, 240' left of centerline, 41' AGL/662' MSL.
 Railroad 1' from DER, 126' left of centerline, 29' AGL/650' MSL.
 OL on Stack 454' from DER, 45' left of centerline, 35' AGL/659' MSL.
 Railroad 190' from DER, 40' left of centerline, 29' AGL/650' MSL.
 OL Stack on Bldg 949' from DER, 44' left of centerline, 41' AGL/668' MSL.
 Stack 958' from DER, 12' left of centerline, 41' AGL/668' MSL.
 Light Standard 701' from DER, 145' right of centerline, 26' AGL/653' MSL.
 Stack 9,474 from DER, 2,415' left of centerline, 241' AGL/872' MSL.
- Rwy 33: Multiple Trees beginning 113' from DER, 118' left of centerline, up to 73' AGL/694' MSL.
 Multiple Trees beginning 572' from DER, 84' right of centerline, up to 92' AGL/709' MSL.
 Flag Pole 963' from DER, 379' left of centerline, 28' AGL/658' MSL.

▼ Visibility reduction by helicopters NA. When local altimeter setting not received, use Detroit Metro Wayne County altimeter setting and increase all MDA 60 feet and increase Cat C and D visibility ¼ mile.

MISSED APPROACH: Climb to 3000 via YQG VOR/DME R-326 to DELOW Int and hold, continue climb-in-hold to 3000.

ATIS 124.875	DETROIT APP CON 126.85 363.2	DETROIT CITY TOWER 121.3 257.8	GND CON 121.85	UNICOM 122.95
-----------------	---------------------------------	-----------------------------------	-------------------	------------------



<div><div>3000</div><div>DELOW</div><div>STACK INT</div><div>YQG</div><div>One Minute Holding Pattern</div></div>				
<div><div>YQG R-326 113.8</div><div>KUDLY INT YQG 8.5</div><div>3000</div><div>146°</div><div>326°</div><div>3000</div><div>VGSI and descent angles not coincident.</div></div>				
<div><div>3.8 NM</div><div>4.4 NM</div><div>4.1 NM</div></div>				
CATEGORY	A	B	C	D
S-33	1240-1 614 (700-1)		1240-1¾ 614 (700-1¾)	1240-2 614 (700-2)
CIRCLING	1240-1 614 (700-1)		1240-1¾ 614 (700-1¾)	1240-2 614 (700-2)

AIRPORT DIAGRAM

DETROIT METROPOLITAN WAYNE COUNTY (DTW)
DETROIT, MICHIGAN

ATIS
133.675
METRO TOWER
135.0 287.1 (WEST)
118.4 287.1 (EAST)
CLNC DEL
120.65

D

42°15'N
VAR 6.8°W
JANUARY 2005
ANNUAL RATE
OF CHANGE
0.0°W

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

RWYS 3R-21L, 4L-22R
S100, ST175, D200, DT350, DDT750
RWYS 4R-22L, 3L-21R, 9L-27R, 9R-27L
S100, ST175, D185, DT350

U.S. CUSTOMS
ASIG NORTH

NORTHWEST
GND CON
121.8

NORTHEAST
GND CON
119.45

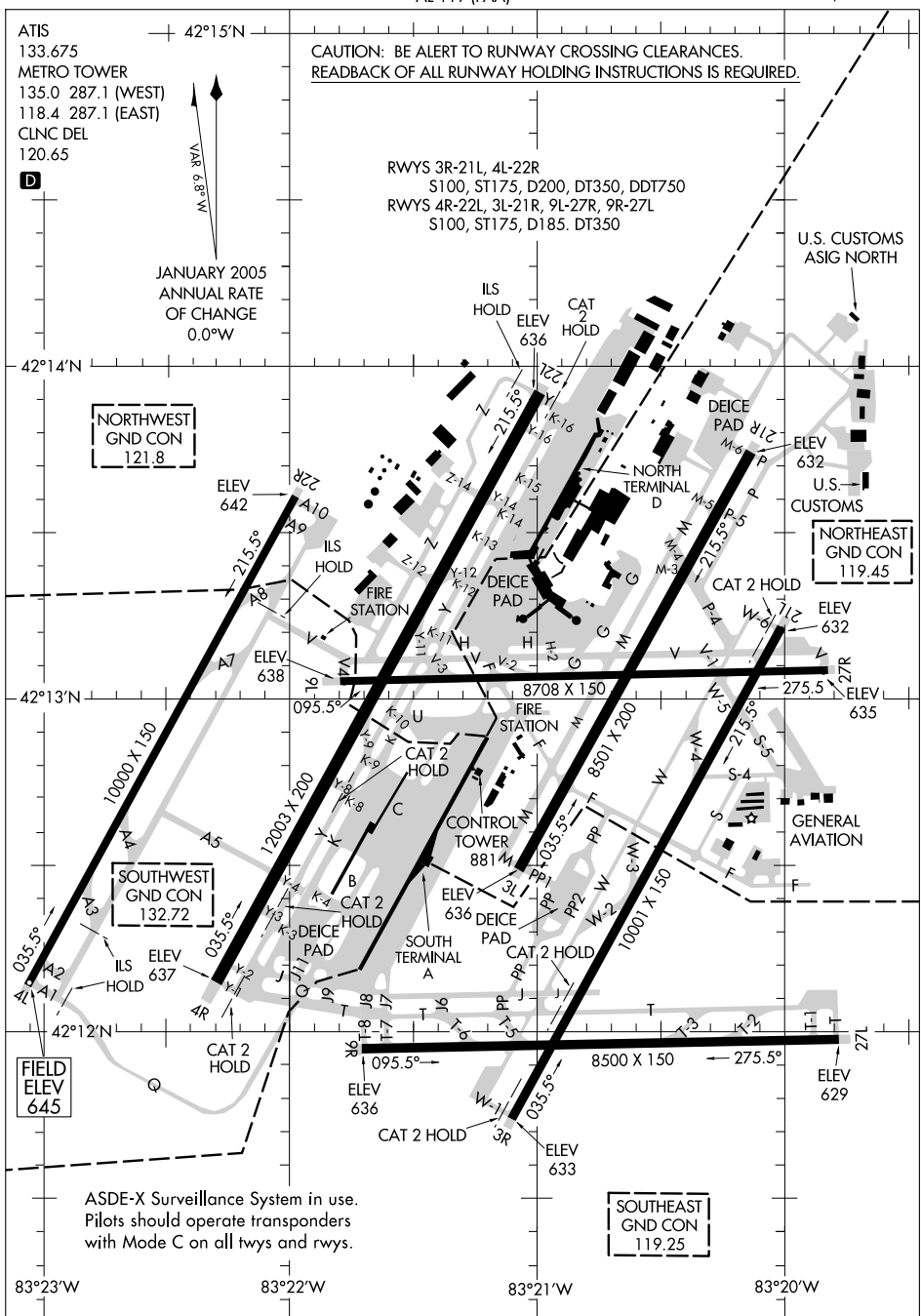
SOUTHWEST
GND CON
132.72

FIELD
ELEV
645

ASDE-X Surveillance System in use.
Pilots should operate transponders
with Mode C on all twys and rwys.

SOUTHEAST
GND CON
119.25

EC-1, 17 DEC 2009 to 14 JAN 2010



AKRON TWO DEPARTURE

SL-119 (FAA)

DETROIT, MICHIGAN

ATIS 133.675
 CLNC DEL
 120.65
 GND CON
 EAST 119.45
 WEST 121.8
 METRO TOWER
 EAST 118.4 287.1
 WEST 135.0 287.1

(10) A/c

VEELA
 N42°07.59'
 W82°45.00'

MAARS
 N42°05.30'
 W82°29.17'

SPHRE
 N42°01.60'
 W82°04.15'

SANDUSKY
 109.2 SKY
 Chan 29

AKRON
 114.4 ACO
 Chan 91
 N41°06.47'-W81°12.09'
 L-30, H-10

DETROIT
 113.4 DXO
 Chan 81
 N42°12.79'-W83°22.00'
 L-28, H-10

TAKE-OFF MINIMUMS:

Rwy's 3L, 3R, 4L, 4R, 9L, 9R, 21L, 21R,
 22L, 22R, 27L, 27R: STANDARD.

SPECIAL INSTRUCTIONS:

When using this departure, file the appropriate
 depicted fix and route.

Jets use Departure Control Frequency 132.025.
 Props use Departure Control Frequency 134.3

NOTE: Radar Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to intercept DXO VOR/DME R-106, to SPHRE INT, then via ACO R-329 to ACO VOR/DME. Jets maintain 10,000 feet, cross DXO 10 DME Arc at or above 5,000 feet for noise abatement. If unable to comply, advise ATC prior to departure. Props maintain 4,000 feet or lower assigned altitude. Expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES

Rwy 3R: Headwall 399' from DER, 566' right of centerline, 17' AGL/647' MSL.

Rwy 4L: Multiple Trnsn Towers 1516' from DER, 827' left of centerline, up to 60' AGL/690' MSL.

Multiple Antennas 2751' from DER, 762' right of centerline, up to 84' AGL/714' MSL.

Rwy 4R: Antenna on Bldg 3348' from DER, 1301' left of centerline, 100' AGL/736' MSL.

Rwy 9L: Multiple Trees 968' to 2519' from DER, 462' left of centerline and 1173' right of centerline, up to 85' AGL/715' MSL.

Rwy 9R: Tree 1837' from DER, 947' right of centerline, 50' AGL/686' MSL.

Rwy 21L: Multiple Trees 1079' to 3910' from DER, 586' left of centerline and 1188' right of centerline, up to 100' AGL/733' MSL.

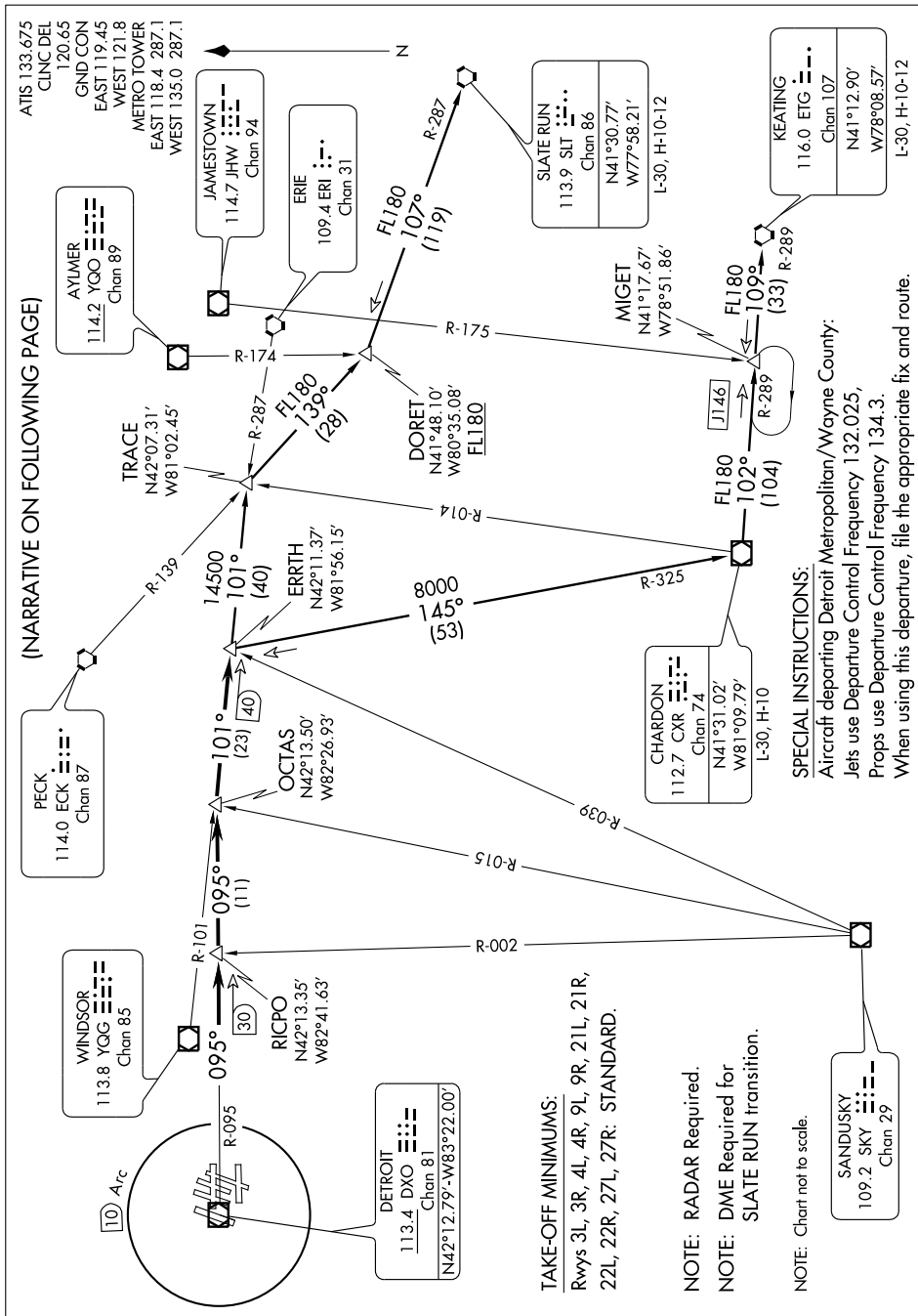
Rwy 22L: Multiple Trees 794' to 3694' from DER, 611' right of centerline and 1381' left of centerline, up to 110' AGL/740' MSL.

Rwy 27R: Rod on ASR 4461' from DER, 464' left of centerline, 106' AGL/756' MSL.

ERRTH TWO DEPARTURE

SL-119 (FAA)

DETROIT, MICHIGAN





DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to intercept DXO VOR/DME R-095 to OCTAS INT then via YQG R-101 to ERRTH, then via (transition). Jets maintain 10,000 feet, cross DXO VOR/DME 10 DME at or above 5,000 feet for noise abatement. If unable to comply, advise ATC prior to departure. Props maintain 4,000 feet or lower assigned altitude. Expect clearance to filed altitude/flight level ten (10) minutes after departure.

CHARDON TRANSITION (ERRTH2.CXR): From over ERRTH INT via CXR R-325 to CXR VOR/DME.

KEATING TRANSITION (ERRTH2.ETG): From over ERRTH INT via CXR R-325 to CXR VOR/DME, then via CXR R-102 and ETG R-289 to MIGET INT, then via ETG R-289 to ETG VORTAC.

SLATE RUN TRANSITION (ERRTH2.SLT): (DME Required) From over ERRTH INT via YQG R-101 to TRACE INT, then via ECK R-139 to DORET INT, then via SLT R-287 to SLT VORTAC.

TAKE-OFF OBSTACLES

Rwy 3R: Headwall 399' from DER, 566' right of centerline, 17' AGL/647' MSL.

Rwy 4L: Multiple transmission towers 1516' from DER, 827' left of centerline, up to 60' AGL/690' MSL.
Multiple antennas 2751' from DER, 762' right of centerline, up to 84' AGL/714' MSL.

Rwy 4R: Antenna on building 3348' from DER, 1301' left of centerline, 100' AGL/736' MSL.

Rwy 9L: Multiple trees 968' to 2519' from DER, 462' left of centerline and 1173' right of centerline, up to 85' AGL/715' MSL.

Rwy 9R: Tree 1837' from DER, 947' right of centerline, 50' AGL/686' MSL.

Rwy 21L: Multiple trees 1079' to 3910' from DER, 586' left of centerline and 1188' right of centerline, up to 100' AGL/733' MSL.

Rwy 22L: Multiple trees 794' to 3694' from DER, 611' right of centerline and 1381' left of centerline, up to 110' AGL/740' MSL.

Rwy 27R: Rod on ASR, 4461' from DER, 464' left of centerline, 106' AGL/756' MSL.

FORT WAYNE THREE DEPARTURE

SL-119 (FAA)

DETROIT, MICHIGAN

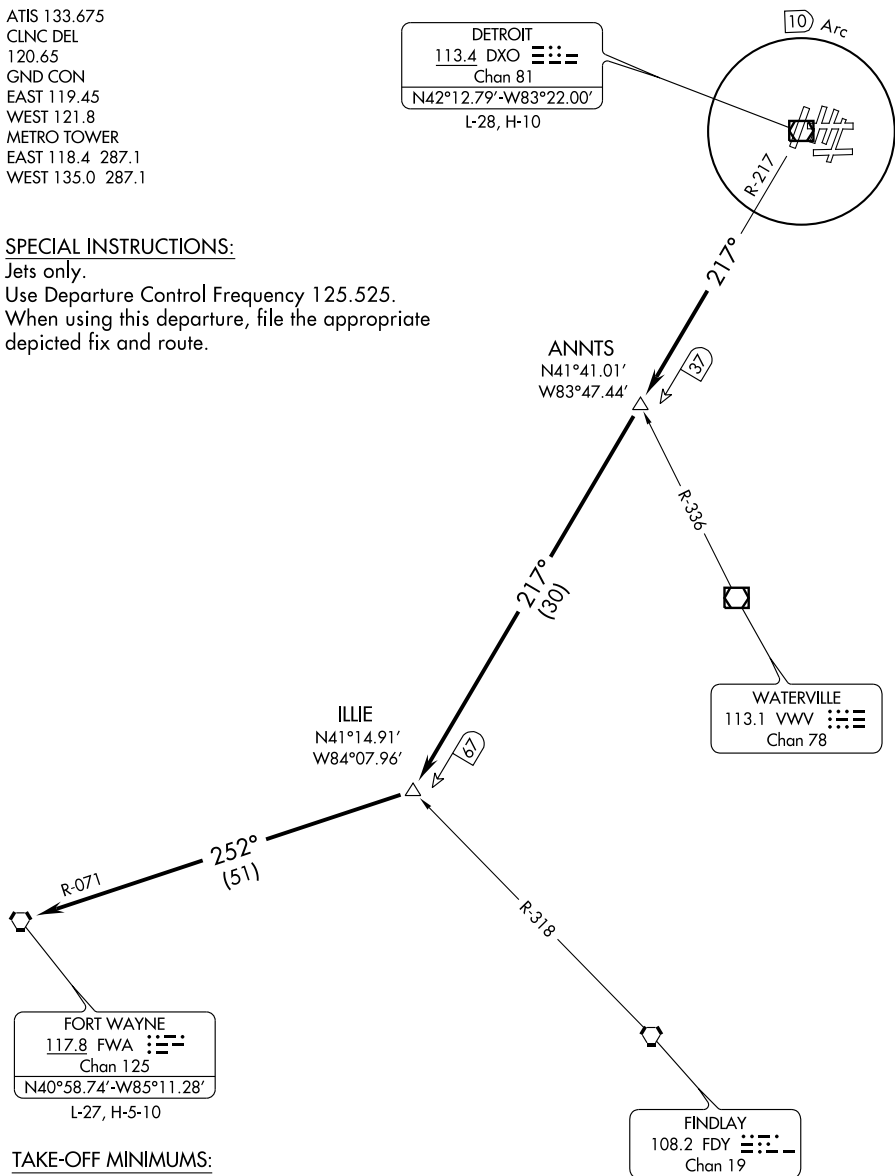
ATIS 133.675
 CLNC DEL
 120.65
 GND CON
 EAST 119.45
 WEST 121.8
 METRO TOWER
 EAST 118.4 287.1
 WEST 135.0 287.1

SPECIAL INSTRUCTIONS:

Jets only.

Use Departure Control Frequency 125.525.

When using this departure, file the appropriate depicted fix and route.

TAKE-OFF MINIMUMS:

Rwys 3L, 3R, 4L, 4R, 9L, 9R,
 21L, 21R, 22L, 22R, 27L, 27R: STANDARD.

NOTE: RADAR Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to intercept DXO VOR/DME R-217 to ILLIE INT, then via FWA R-071 to FWA VORTAC. Maintain 10,000 feet, cross DXO VOR/DME 10 DME at or above 5,000 feet for noise abatement. If unable to comply, advise ATC prior to departure. Expect clearance to filed flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

- Rwy 3R: Headwall 399' from DER, 566' right of centerline, 17' AGL/647' MSL.
- Rwy 4L: Multiple Trmsn towers 1516' from DER, 827' left of centerline, up to 60' AGL/690' MSL.
Multiple antennas 2751' from DER, 762' right of centerline, up to 84' AGL/714' MSL.
- Rwy 4R: Antenna on building 3348' from DER, 1301' left of centerline, 100' AGL/736' MSL.
- Rwy 9L: Multiple trees 968' to 2519' from DER, 462' left of centerline and 1173' right of centerline, up to 85' AGL/715' MSL.
- Rwy 9R: Tree 1837' from DER, 947' right of centerline, 50' AGL/686' MSL.
- Rwy 21L: Multiple trees 1079' to 3910' from DER, 586' left of centerline and 1188' right of centerline, up to 100' AGL/733' MSL.
- Rwy 22L: Multiple trees 794' to 3694' from DER, 611' right of centerline to 1381' left of centerline, up to 110' AGL/740' MSL.
- Rwy 27R: Rod on ASR, 4461' from DER, 464' left of centerline, 106' AGL/756' MSL.



ARRIVAL ROUTE DESCRIPTION

BECKLEY TRANSITION (BKW.GEMNI2): From over BKW VORTAC via BKW R-350 to JAMOX INT, then via DJB R-177 to DJB VOR/DME. Thence. . . .

MONTEBELLO TRANSITION (MOL.GEMNI2): From over MOL VOR/DME via MOL R-288 to BIGAL INT, then via HVQ R-104 to TARCI INT, then via BKW R-350 to JAMOX INT, then via DJB R-177 to DJB VOR/DME. Thence. . . .

SINDE TRANSITION (SINDE.GEMNI2): From over SINDE INT via AML R-281 to GEFFS INT, then via ROD R-121 to VLADY INT, then via BKW R-350 to JAMOX INT, then via DJB R-177 to DJB VOR/DME. Thence. . . .

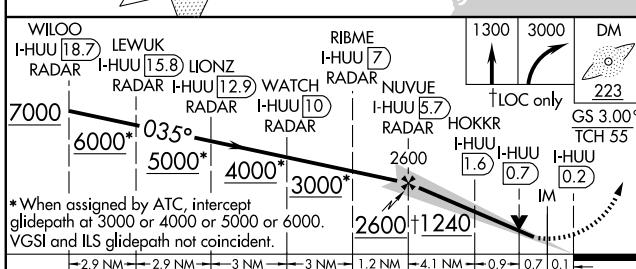
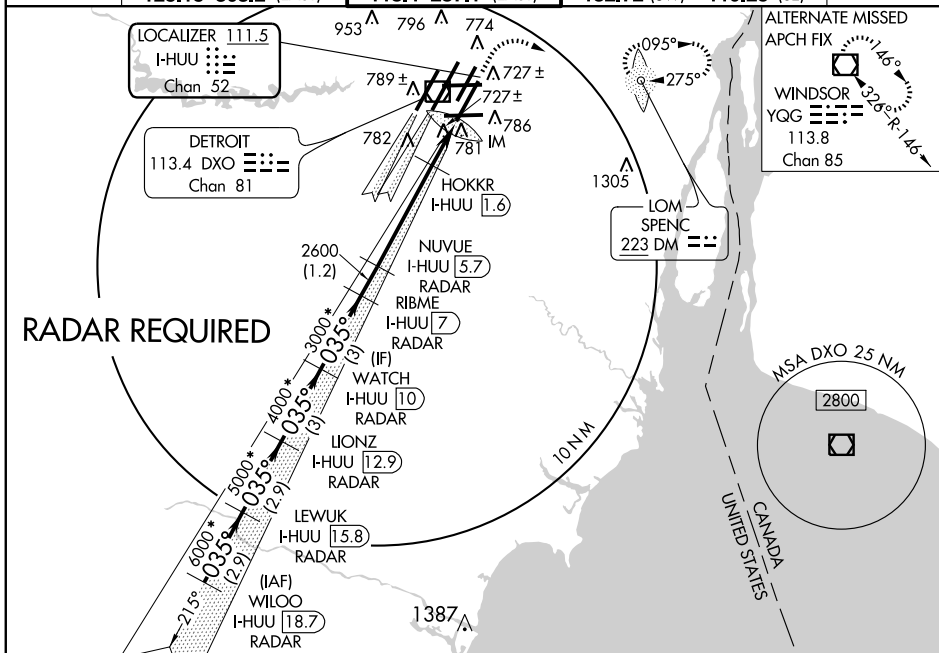
. . . . From over DJB VOR/DME via R-314 to GEMNI INT/36 DME, then via DXO VOR/DME R-144, to GLOZE INT/8 DME. Expect radar vectors to final approach course.

LOC/DME I-HUU 111.5 Chan 52	APP CRS 035°	Rwy Idg 10001 TDZE 633 Apt Elev 645
---	------------------------	--

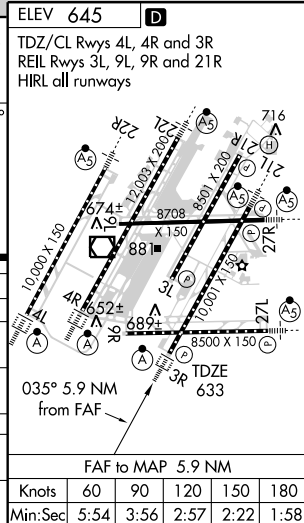
ILS or LOC RWY 3R

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST)	GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	CLNC DEL 120.65
-------------------------------	--	--	---	----------------------------------



CATEGORY	A	B	C	D
S-ILS 3R	833/18 200 (200-½)			
S-LOC 3R	1240/24 607 (600-½)	1240/60 607 (600-1¼)	1240-1½ 607 (600-1½)	
CIRCLING	1240-1 595 (600-1)	1240-1¾ 595 (600-1¾)	1240-2 595 (600-2)	
HOKKR FIX MINIMUMS				
S-LOC 3R	980/24 347 (400-½)	980/40 347 (400-¾)		
CIRCLING	1200-1 555 (600-1)	1200-1½ 555 (600-1½)	1200-2 555 (600-2)	



LOC/DME I-DTW 110.7 Chan 44	APP CRS 035°	Rwy Idg 12003 TDZE 638 Apt Elev 645
---	------------------------	--

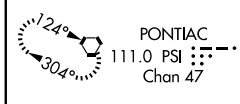
ILS or LOC RWY 4R

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

Simultaneous approach authorized with ILS Rwy 3R. ADF and DME or Radar Required. LOC procedure NA during simultaneous operations.	ALSF-2 	MISSED APPROACH: Climb to 3000 then right turn direct MADDs LOM and hold.
---	------------	--

ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST)	GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	CLNC DEL 120.65
------------------------	---	---	--	---------------------------

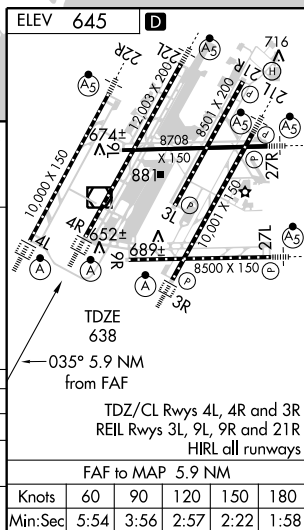
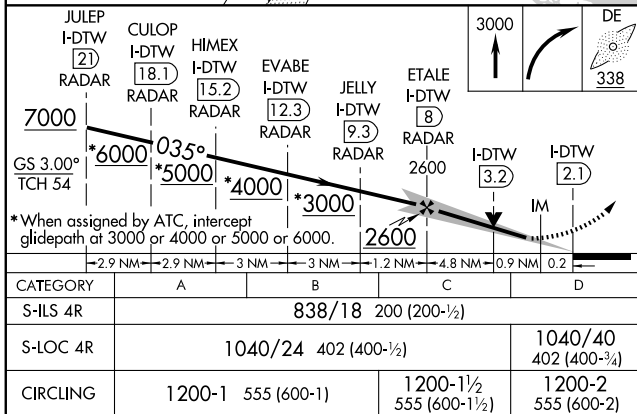
ALTERNATE MISSED APCH FIX



MISSED APCH FIX



1391

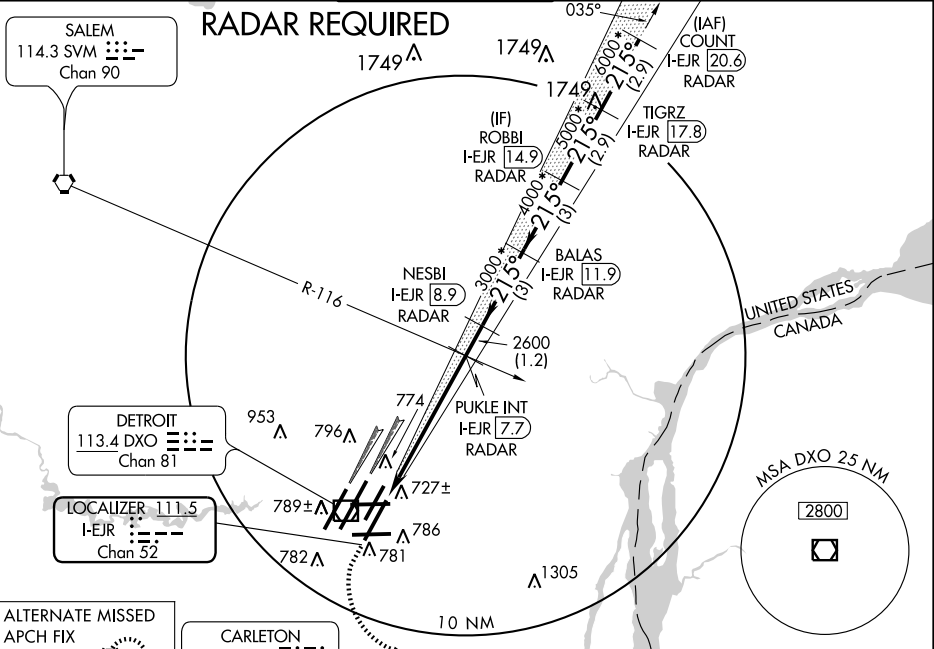


LOC/DME I-EJR	APP CRS	Rwy Idg	10001
111.5	215°	TDZE	632
Chan 52		Apt Elev	645

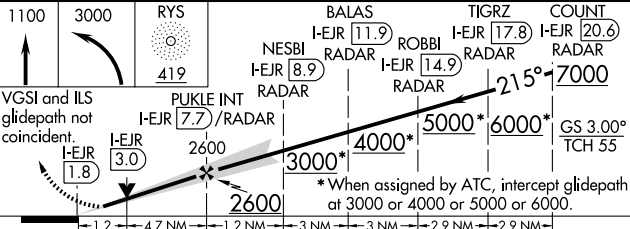
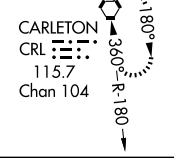
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

<div><div>Simultaneous approach authorized with Rwy 22L or Rwy 22R. ADF and DME or RADAR Required. LOC procedure NA during simultaneous operations.</div><div>** RVR 1800 authorized with the use of FD or AP or HUD to DA.</div></div>	MALSR	MISSED APPROACH: Climb to 1100 then climbing left turn to 3000 direct RYS NDB and hold.
---	-------	---

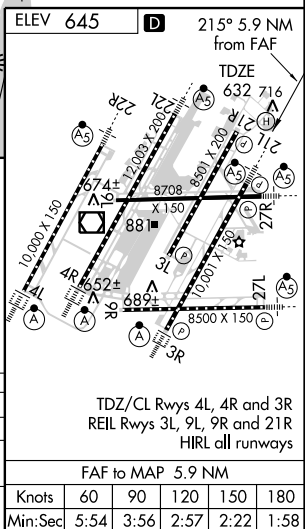
ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65



ALTERNATE MISSED APCH FIX



CATEGORY	A	B	C	D
S-ILS 21L	** 832/24 200 (200-1/2)			
S-LOC 21L	1100/24 468 (500-1/2)	1100/40 468 (500-3/4)	1100/50 468 (500-1)	
CIRCLING	1200-1 555 (600-1)	1200-1 555 (600-1 1/2)	1200-2 555 (600-2)	



ILS or LOC RWY 22L

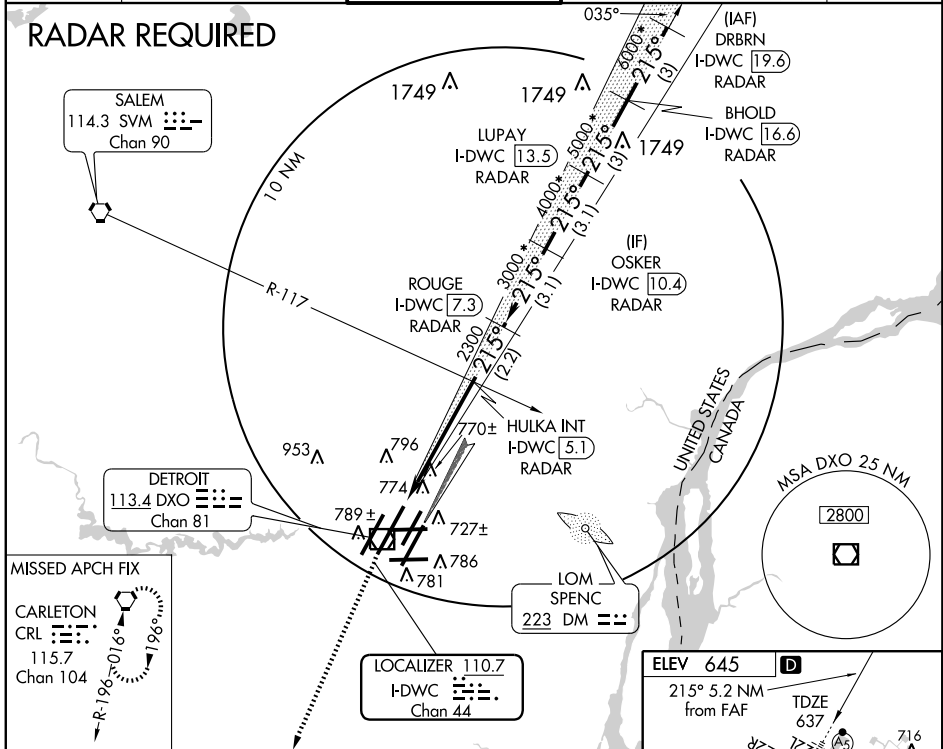
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-DWC 110.7 Chan 44	APP CRS 215°	Rwy Idg TDZE Apt Elev	12003 637 645
---	------------------------	-----------------------------	--

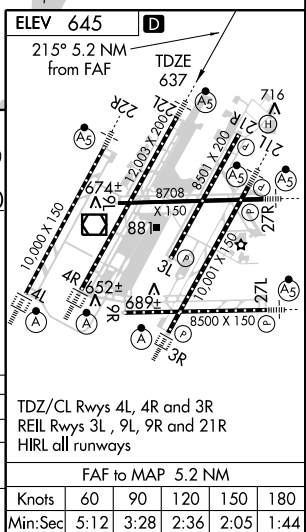
<p>Simultaneous approach authorized with Rwy 21L. DME or RADAR Required. LOC procedure NA during simultaneous operations.</p> <p>**RVR 1800 authorized with the use of FD or AP or HUD to DA.</p>	<p>MALSR</p> <p></p>	<p>MISSED APPROACH: Climb to 3000 direct CRL VORTAC and hold.</p>
---	----------------------	---

ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST)	GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	CLNC DEL 120.65
------------------------	---	---	--	---------------------------

RADAR REQUIRED



3000	CRL 115.7	*When assigned by ATC, intercept glidepath at 3000 or 4000 or 5000 or 6000.			
I-DWC 0.2	I-DWC 1.1	HULKA INT I-DWC 5.1	ROUGE I-DWC 7.3	LUPAY I-DWC 13.5	DRBRN I-DWC 19.6
2300	2300	3000*	4000*	5000*	6000*
1.2	4.0	2.2 NM	3.1 NM	3.1 NM	3 NM
CATEGORY	A	B	C	D	
S-ILS 22L	** 837/24 200 (200-½)				
S-LOC 22L	1080/24	443 (500-½)	1080/40 443 (500-¾)	1080/50 443 (500-1)	
CIRCLING	1200-1	555 (600-1)	1200-1½ 555 (600-1½)	1200-2 555 (600-2)	

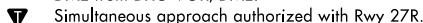


LOC I-EPA <u>110.15</u>	APP CRS 275°	Rwy Idg TDZE Apt Elev	8500 631 646
-----------------------------------	------------------------	-----------------------------	---

ILS or LOC RWY 27L

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

DME from DXO VOR/DME.



RVR 1800 authorized with the use of FD or AP or HUD to DA.

MALSR

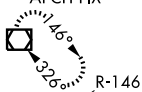



MISSED APPROACH: Climb to 1500 then climbing left turn to 3000 direct CRL VORTAC and hold.


ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST)	GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	CLNC DEL 120.65
-----------------	---	---	--	--------------------

ALTERNATE MISSED	
------------------	--

APCH FIX



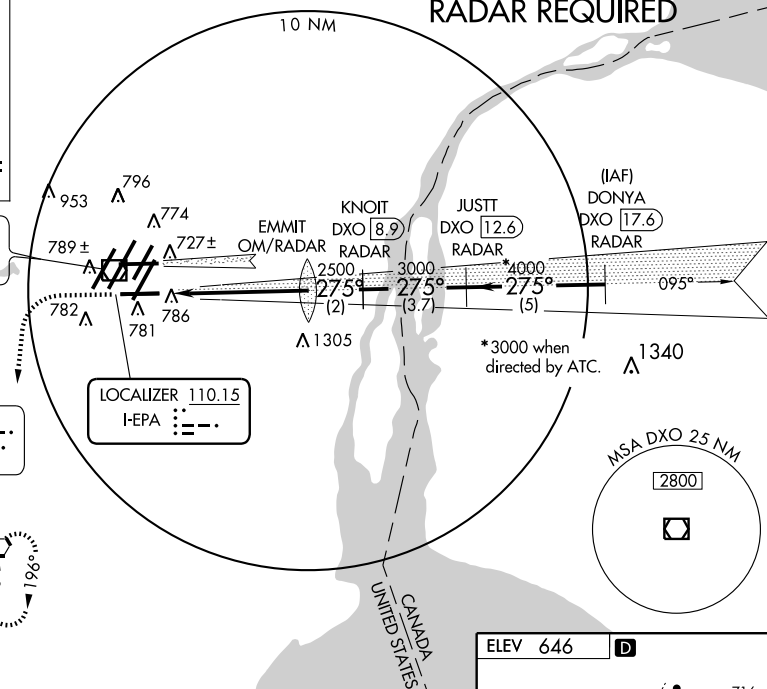
WINDSOR
8.8 YQG 
Chan 85

DETROIT
113.4 DXO 
Chan 81

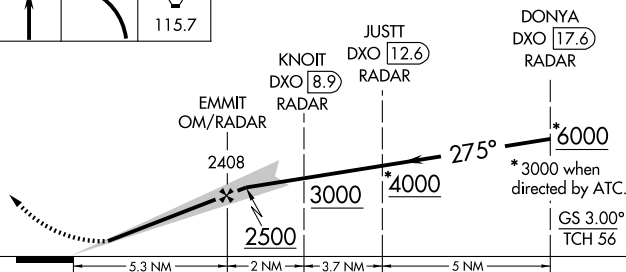
CARLETON
115.7 CRL 
Chan 104

LOCALIZER 110.15
..

RADAR REQUIRED



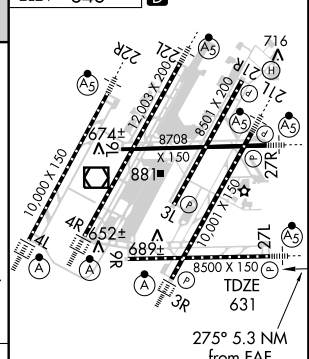
1500	3000	CRL 115.7
------	------	--------------



CATEGORY	A	B	C	D
S-ILS 27L	# 831/24 200 (200-½)			
S-LOC 27L	1060/24 429 (500-½)	1060/40 429 (500-¾)	1060/50 429 (500-1)	
CIRCLING	1200-1 554 (600-1)	1200-1½ 554 (600-½)	1200-2 554 (600-2)	

ELEV 646

D



TDZ/CL Rwy 4L, 4R and 3R
REIL Rwy 3L, 9L, 9R and 21R
HIRL all runways

FAF to MAP 5.3 NM

Knots	60	90	120	150	180
Min:Sec	5:18	3:32	2:39	2:07	1:46

LOC I-DMI <u>108.5</u>	APP CRS 275°	Rwy Idg TDZE Apt Elev	8708 635 646
----------------------------------	------------------------	-----------------------------	---

ILS or LOC RWY 27R

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

T DME from DXO VOR/DME. DME or Radar required.

Simultaneous approach authorized with Rwy 27L.

RVR 1800 authorized with the use of FD or AP or HUD to DA.

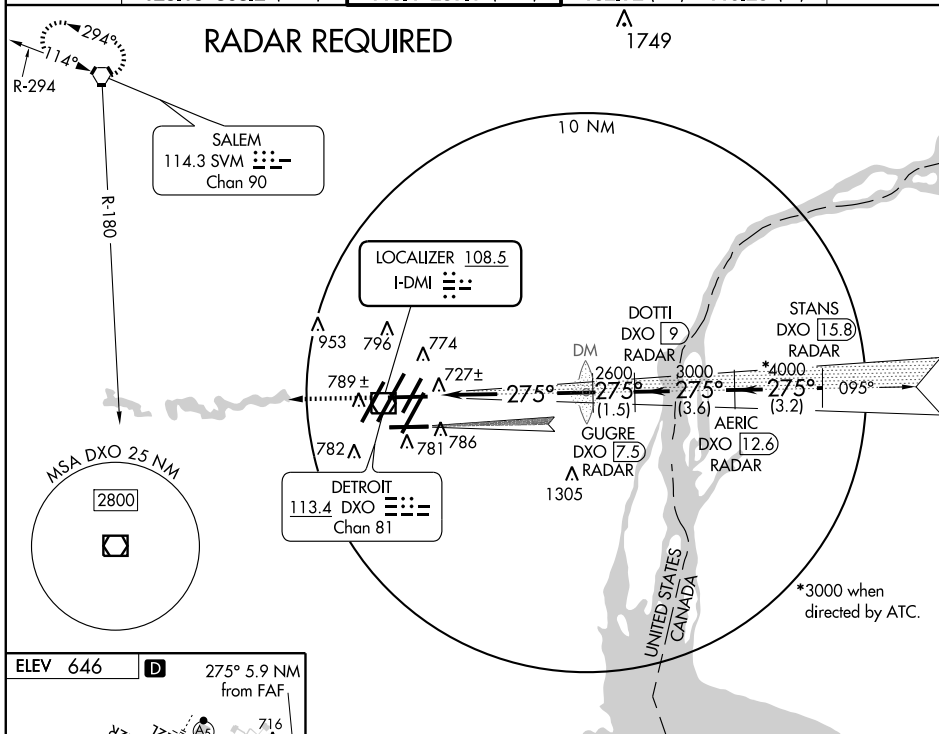
MALSR



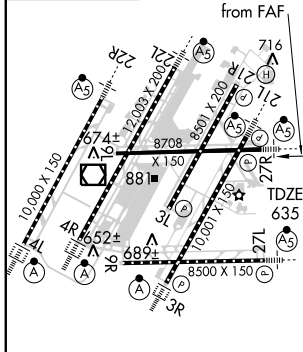
MISSED APPROACH: Climb to 3000 via heading 275° and SVM R-180 to SVM VORTAC and hold.

ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST)	GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	CLNC DEL 120.65
-----------------	---	---	--	--------------------

RADAR REQUIRED




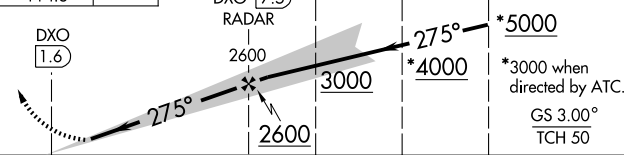
ELEV 646	D	275° 5.9 NM
----------	----------	-------------



TDZ/CL Rwy 4L, 4R and 3R
REIL Rwy 3L, 9L, 9R and 21R
HIRL all runways

FAF to MAP 5.9 NM

Knots	60	90	120	150	180
Min:Sec	5:54	3:56	2:57	2:22	1:58

3000 ↑ HDG 275° SVM R-180 114.3		SVM 	
			
CATEGORY	A	B	C
S-ILS 27R	# 835/24 200 (200-½)		
S-LOC 27R	1060/24 425 (500-½)	1060/40 425 (500-¾)	
CIRCLING	1200-1 554 (600-1)	1200-1½ 554 (600-1½)	1200-2 554 (600-2)

ILS PRM RWY 3R (SIMULTANEOUS CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-HUU 111.5 Chan 52	APP CRS 035°	Rwy Idg 10001 TDZE 633 Apt Elev 645
---	------------------------	--

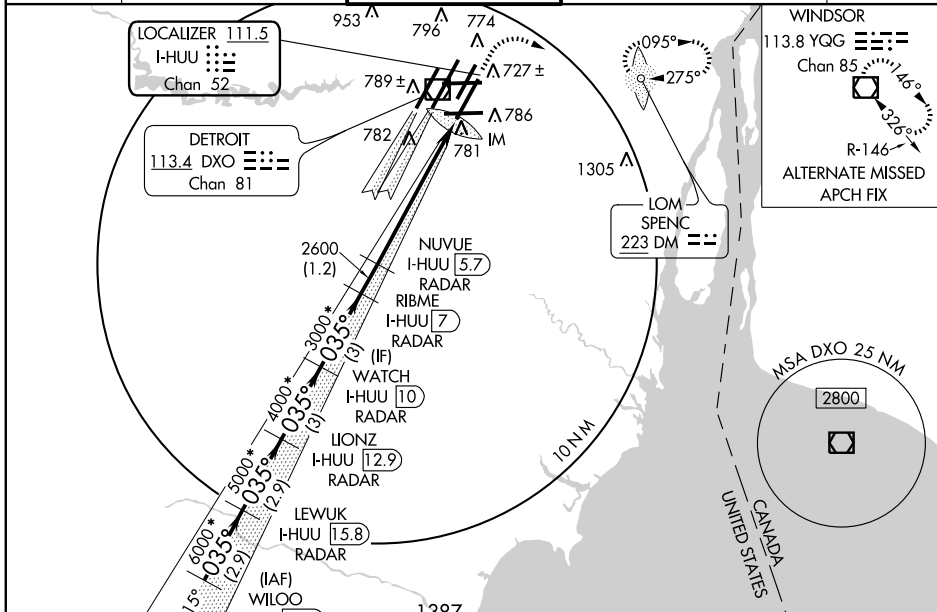
Simultaneous close parallel approach authorized with ILS PRM Rwy 4R, ILS PRM Rwy 4R (CAT II), ILS PRM Rwy 4R (CAT III) and ILS PRM Rwy 4L. Procedure NA when glideslope not available. Dual VHF comm required. See additional requirements on AAUP. ADF and DME or Radar required.

ALSF-2



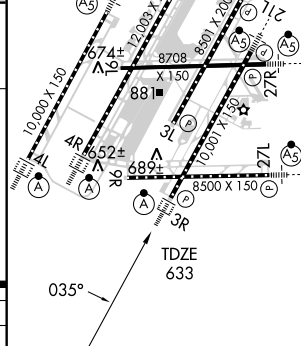
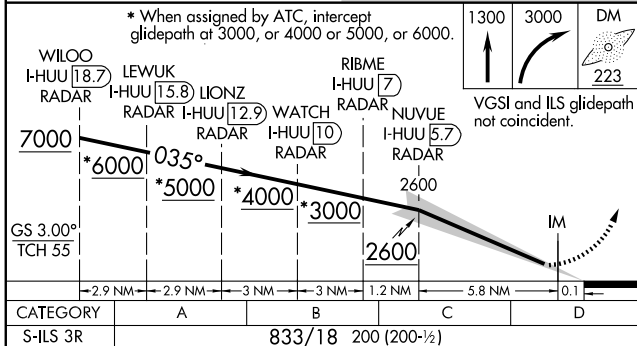
MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct SPENC LOM and hold.

ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST) PRM 128.35	GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	CLNC DEL 120.65
------------------------	---	--	--	---------------------------



ELEV 645	D
TDZ/CL Rwy 4L, 4R and 3R REIL Rwy 3L, 9L, 9R and 21R HIRL all runways	

RADAR REQUIRED



ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 3R approach. If later advised to expect an ILS 3R approach, the ILS/PRM 3R chart may be used after completing the following briefing items:

- (a) Minimums and missed approach procedures are unchanged.
- (b) Monitor frequency no longer required.
- (c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 3R approach.

2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will **ONLY** transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.

3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.

- (a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstruction clearance. The MVA in the final approach segment is 2400 feet south of Detroit Metropolitan Wayne County Airport.
- (b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)," the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:

"TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY,
HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".

4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.

Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

LOC/DME I-HUU 111.5 Chan 52	APP CRS 035°	Rwy Idg 10001 TDZE 633 Apt Elev 645
---	------------------------	--

(SIMULTANEOUS CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

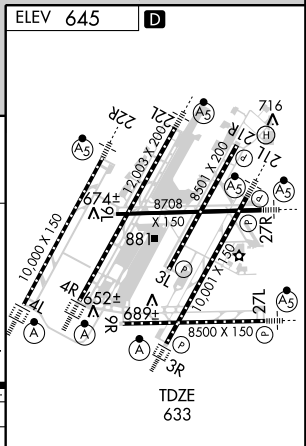
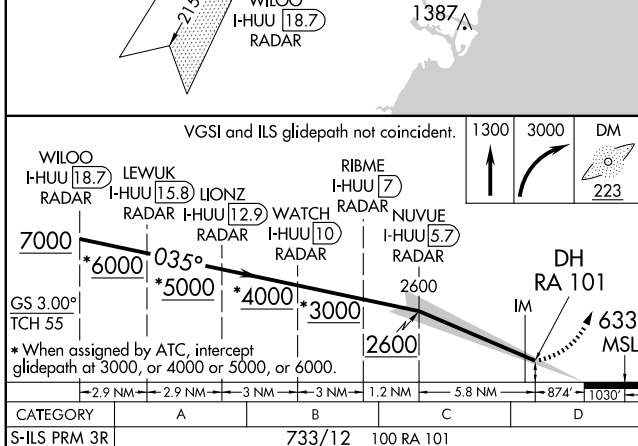
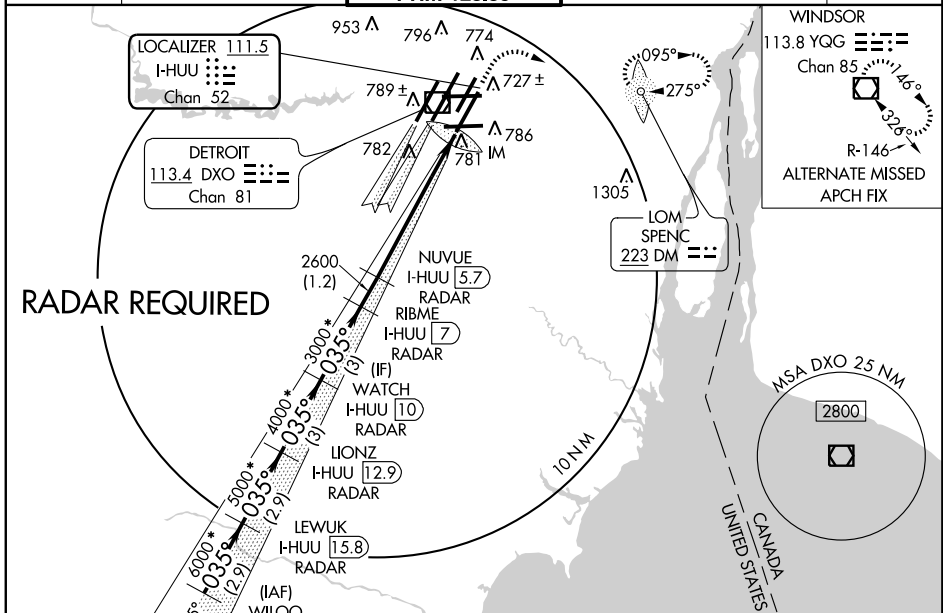
T Simultaneous close parallel approach authorized with ILS PRM Rwy 4R, ILS PRM Rwy 4R (CAT II), ILS PRM Rwy 4R (CAT III) and ILS PRM Rwy 4L. Procedure NA when glideslope not available. Dual VHF comm required. See additional requirements on AAUP. ADF and DME or Radar required.

ALSF-2



MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct SPENC LOM and hold.

ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST) PRM 128.35	GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	CLNC DEL 120.65
------------------------	---	--	--	---------------------------



CATEGORY II ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

TDZ/CL Rwy 4L, 4R and 3R
REIL Rwy 3L, 9L, 9R and 21R
HIRL all runways

ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 3R approach. If later advised to expect an ILS 3R approach, the ILS/PRM 3R chart may be used after completing the following briefing items:

- (a) Minimums and missed approach procedures are unchanged.
- (b) Monitor frequency no longer required.
- (c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 3R approach.

2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will **ONLY** transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.

3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.

- (a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstruction clearance. The MVA in the final approach segment is 2400 feet south of Detroit Metropolitan Wayne County Airport.
- (b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)," the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:

"TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY,
HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".

4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.

Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

DETROIT, MICHIGAN

AL-119 (FAA)

ILS PRM RWY 3R (CAT III)

LOC/DME I-HUU 111.5 Chan 52	APP CRS 035°	Rwy Idg 10001 TDZE 633 Apt Elev 645
---	------------------------	--

(SIMULTANEOUS CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

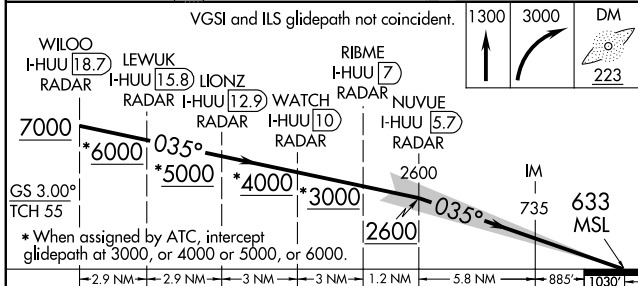
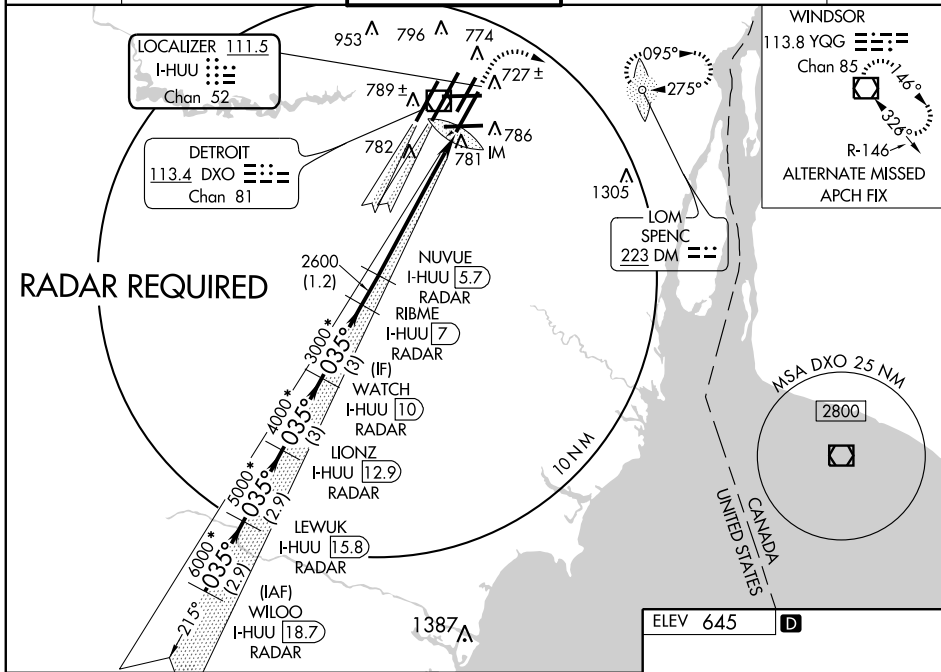
Simultaneous close parallel approach authorized with ILS PRM Rwy 4R, ILS PRM Rwy 4R (CAT II), ILS PRM Rwy 4R (CAT III) and ILS PRM Rwy 4L. Procedure NA when glideslope not available. Dual VHF comm required. See additional requirements on AAUP. ADF and DME or Radar required.

ALSF-2



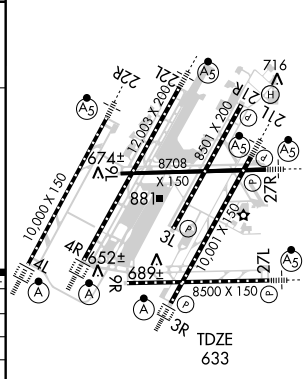
MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct SPENC LOM and hold.

ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST) PRM 128.35	GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	CLNC DEL 120.65
------------------------	---	--	--	---------------------------



CATEGORY	A	B	C	D
S-ILS PRM 3R		CAT IIIA	RVR 07	
S-ILS PRM 3R		CAT IIIB	RVR 06	
S-ILS PRM 3R		CAT IIIC	NA	

CATEGORY III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED



TDZ/CL Rwy 4L, 4R and 3R
REIL Rwy 3L, 9L, 9R and 21R
HIRL all runways

EC-1, 17 DEC 2009 to 14 JAN 2010

ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 3R approach. If later advised to expect an ILS 3R approach, the ILS/PRM 3R chart may be used after completing the following briefing items:

- (a) Minimums and missed approach procedures are unchanged.
- (b) Monitor frequency no longer required.
- (c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 3R approach.

2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will **ONLY** transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.

3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.

- (a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstruction clearance. The MVA in the final approach segment is 2400 feet south of Detroit Metropolitan Wayne County Airport.
- (b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)," the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:

"TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY,
HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".

4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.

Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

DETROIT, MICHIGAN

AL-119 (FAA)

ILS PRM RWY 4R

LOC/DME I-DTW 110.7 Chan 44	APP CRS 035°	Rwy Idg TDZE Apt Elev	12003 638 645
---	------------------------	-----------------------------	--

(SIMULTANEOUS CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

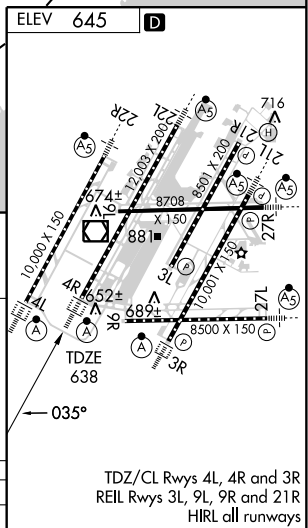
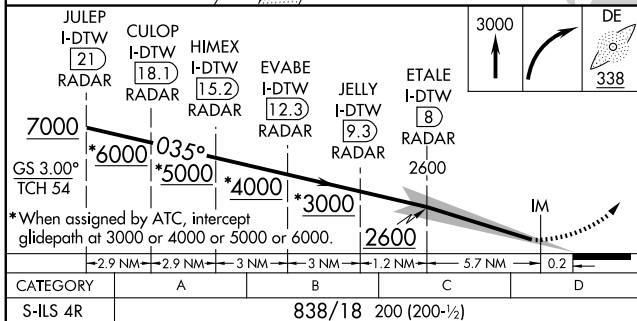
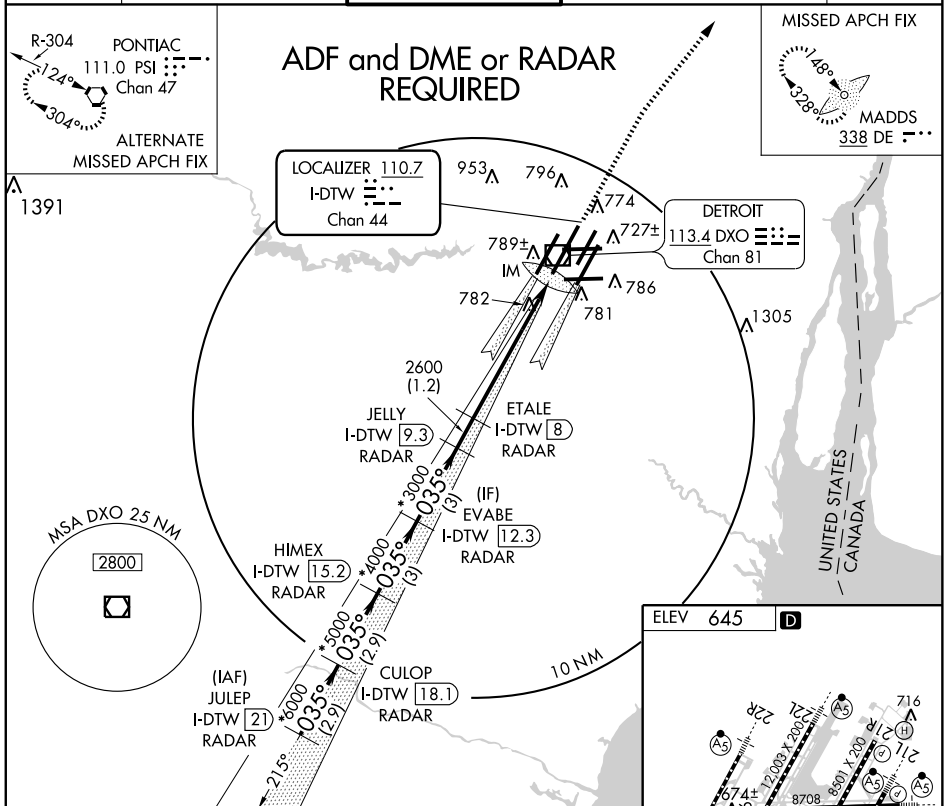
Simultaneous close parallel approach authorized with ILS PRM Rwy 4L and ILS PRM Rwy 3R, ILS PRM Rwy 3R (CAT II), ILS PRM Rwy 3R (CAT III). Procedure not authorized when glideslope not available. Dual VHF Comm required. See additional requirements on AAUP.

ALSF-2



MISSED APPROACH: Climb to 3000 then right turn direct MADDS LOM and hold.

ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST) PRM 135.775	GND CON 121.8 (NW) 132.72 (SW) 119.45 (NE) 119.25 (SE)	CLNC DEL 120.65
------------------------	---	---	--	---------------------------



TDZ/CL Rwy 4L, 4R and 3R
REIL Rwy 3L, 9L, 9R and 21R
HRL all runways

EC-1, 17 DEC 2009 to 14 JAN 2010

ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.
1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 4R approach. If later advised to expect an ILS 4R approach, the ILS/PRM 4R chart may be used after completing the following briefing items:
 - (a) Minimums and missed approach procedures are unchanged.
 - (b) Monitor frequency no longer required.
 - (c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 4R approach.
 2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will **ONLY** transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.
 3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.
 - (a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstruction clearance. The MVA in the final approach segment is 2400 feet south of Detroit Metropolitan Wayne County Airport.
 - (b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)," the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:
"TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY,
HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".
 4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.

Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

DETROIT, MICHIGAN

AL-119 (FAA)

ILS PRM RWY 4R (CAT II)

LOC/DME I-DTW 110.7 Chan 44	APP CRS 035°	Rwy Idg TDZE Apt Elev	12003 638 645
---	------------------------	-----------------------------	--

(SIMULTANEOUS CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

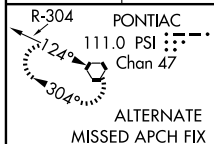
Simultaneous close parallel approach authorized with ILS PRM Rwy 4L and ILS PRM Rwy 3R, ILS PRM Rwy 3R (CAT II), ILS PRM Rwy 3R (CAT III). Procedure not authorized when glideslope not available. Dual VHF Comm required. See additional requirements on AAUP.

ALSF-2



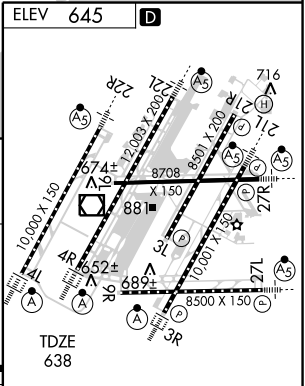
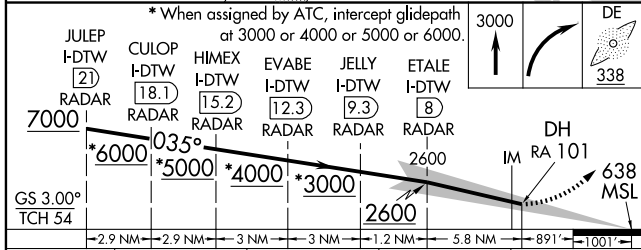
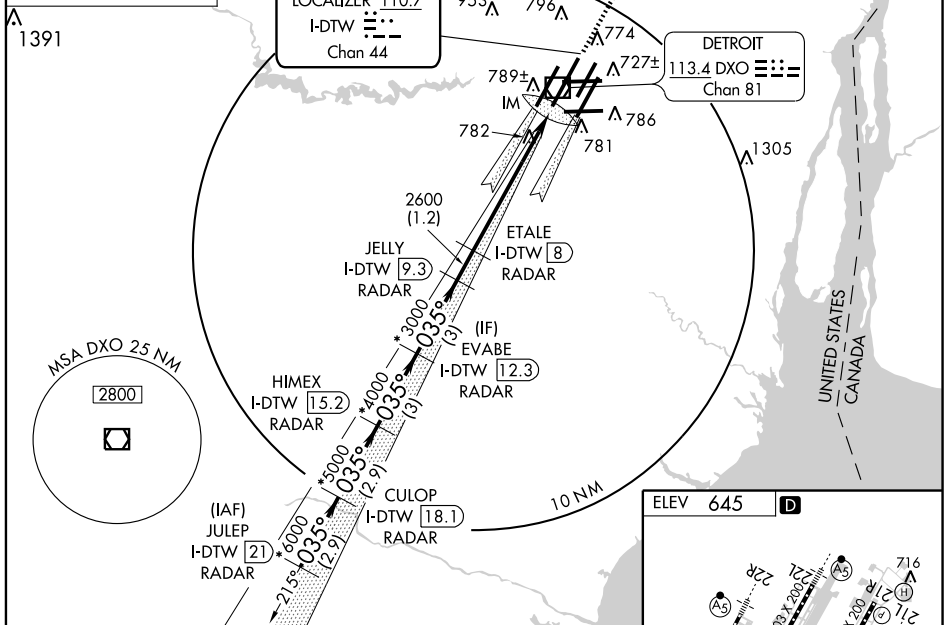
MISSED APPROACH: Climb to 3000 then right turn direct MADDs LOM and hold.

ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST) PRM 135.775	GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	CLNC DEL 120.65
------------------------	---	---	--	---------------------------



ADF and DME or RADAR REQUIRED

MISSED APCH FIX



CATEGORY II ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

EC-1: 17 DEC 2009 to 14 JAN 2010

ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.
1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 4R approach. If later advised to expect an ILS 4R approach, the ILS/PRM 4R chart may be used after completing the following briefing items:
 - (a) Minimums and missed approach procedures are unchanged.
 - (b) Monitor frequency no longer required.
 - (c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 4R approach.
 2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will **ONLY** transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.
 3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.
 - (a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstruction clearance. The MVA in the final approach segment is 2400 feet south of Detroit Metropolitan Wayne County Airport.
 - (b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)," the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:
"TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY,
HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".
 4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.

Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.
1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 4R approach. If later advised to expect an ILS 4R approach, the ILS/PRM 4R chart may be used after completing the following briefing items:
 - (a) Minimums and missed approach procedures are unchanged.
 - (b) Monitor frequency no longer required.
 - (c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 4R approach.
 2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will **ONLY** transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.
 3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.
 - (a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstruction clearance. The MVA in the final approach segment is 2400 feet south of Detroit Metropolitan Wayne County Airport.
 - (b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)," the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:
"TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY,
HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".
 4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.

Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

DETROIT, MICHIGAN

AL-119 (FAA)

ILS PRM RWY 21L (SIMULTANEOUS CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-EJR Chan 52	APP CRS 215°	Rwy Idg TDZE Apt Elev	10001 632 645
---------------------------------	------------------------	-----------------------------	--

MALSR

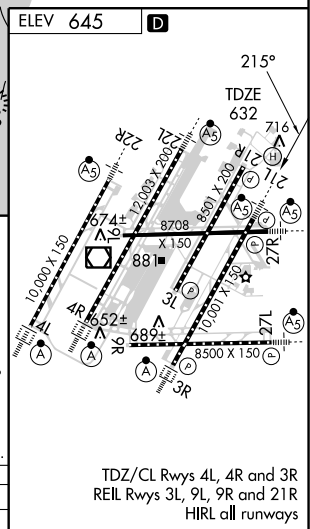
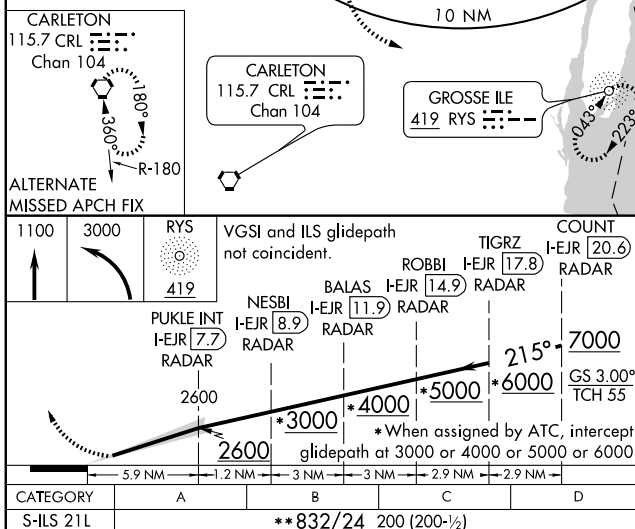
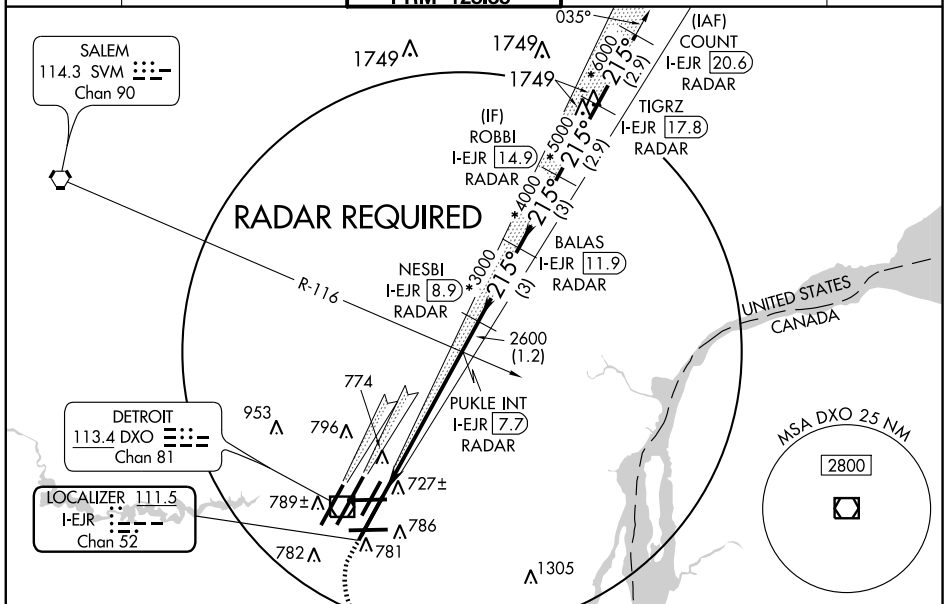


MISSED APPROACH: Climb to 1100 then climbing left turn to 3000 direct RYS NDB and hold.

Simultaneous close parallel approach authorized with ILS PRM Rwy 22L and ILS PRM Rwy 22R. Procedure NA when glide slope not available. ADF and RADAR or DME Required. Dual VHF Comm Required. See additional requirements on AAUP.

** RVR 1800 authorized with the use of FD or HUD to DA.

ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST) PRM 128.35	GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	CLNC DEL 120.65
------------------------	---	--	--	---------------------------



EC-1, 17 DEC 2009 to 14 JAN 2010

ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 21L approach. If later advised to expect an ILS 21L approach, the ILS/PRM 21L chart may be used after completing the following briefing items:

- (a) Minimums and missed approach procedures are unchanged.
- (b) Monitor frequency no longer required.
- (c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 21L approach.

2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will **ONLY** transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.

3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.

- (a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstruction clearance. The MVA in the final approach segment is 2800 feet north of Detroit Metropolitan Wayne County Airport.
- (b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)", the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:

"TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY,
HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".

4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.

Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

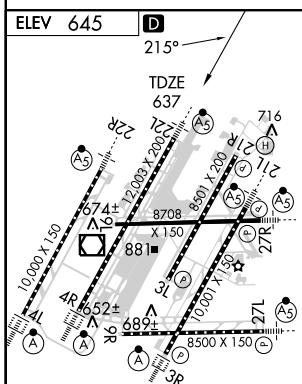
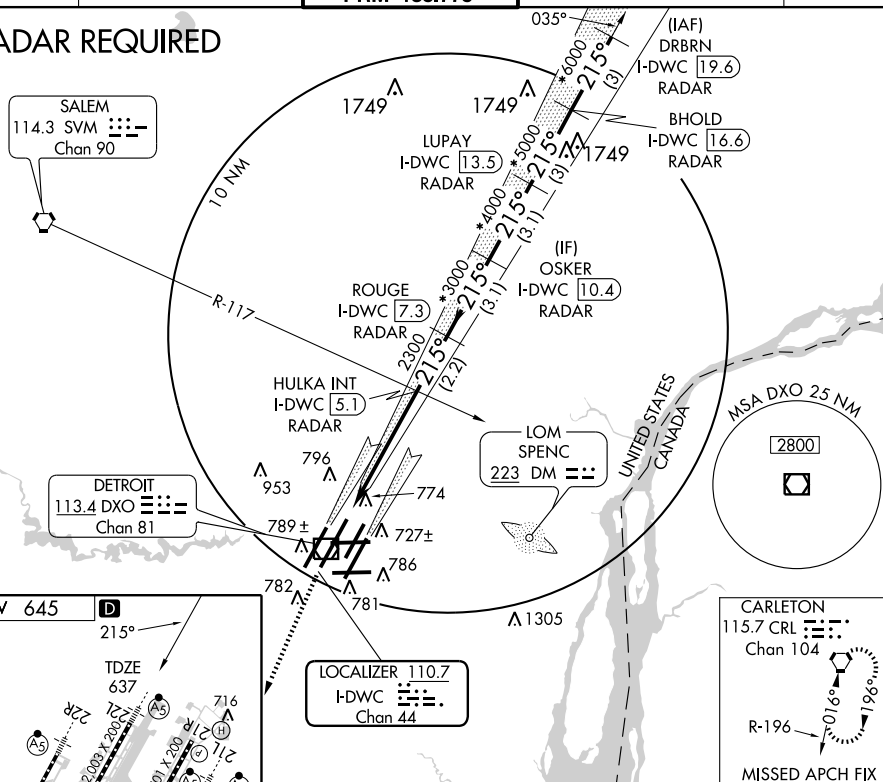
I LS PRM RWY 22I

(SIMULTANEOUS CLOSE PARALLEL)
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

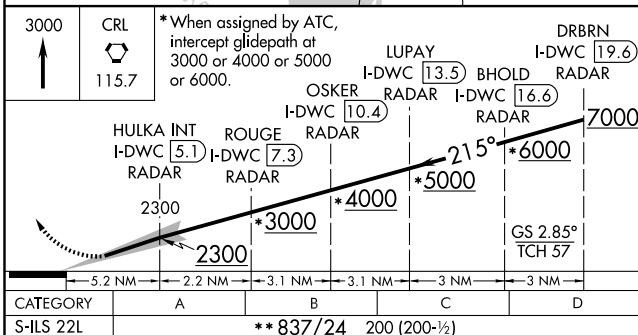
MISSED APPROACH:
Climb to 3000 direct
CRL VORTAC and hold.

CLNC DEL
120-65

RADAR REQUIRED



TDZ/CL Rwy 4L, 4R and 3R
REIL Rwy 3L, 9L, 9R and 21R
HIRL all runways



EC-1. 17 DEC 2009 to 14 JAN 2010

ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 22L approach. If later advised to expect an ILS 22L approach, the ILS/PRM 22L chart may be used after completing the following briefing items:

- (a) Minimums and missed approach procedures are unchanged.
- (b) Monitor frequency no longer required.
- (c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 22L approach.

2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will **ONLY** transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.

3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.

- (a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstruction clearance. The MVA in the final approach segment is 2800 feet north of Detroit Metropolitan Wayne County Airport.
- (b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)", the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:
"TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY,
HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".

4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.

Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

LOC/DME I-HUU 111.5 Chan 52	APP CRS 035°	Rwy Idg TDZE Apt Elev	10001 633 645
---	------------------------	-----------------------------	--

ILS RWY 3R (CAT II)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

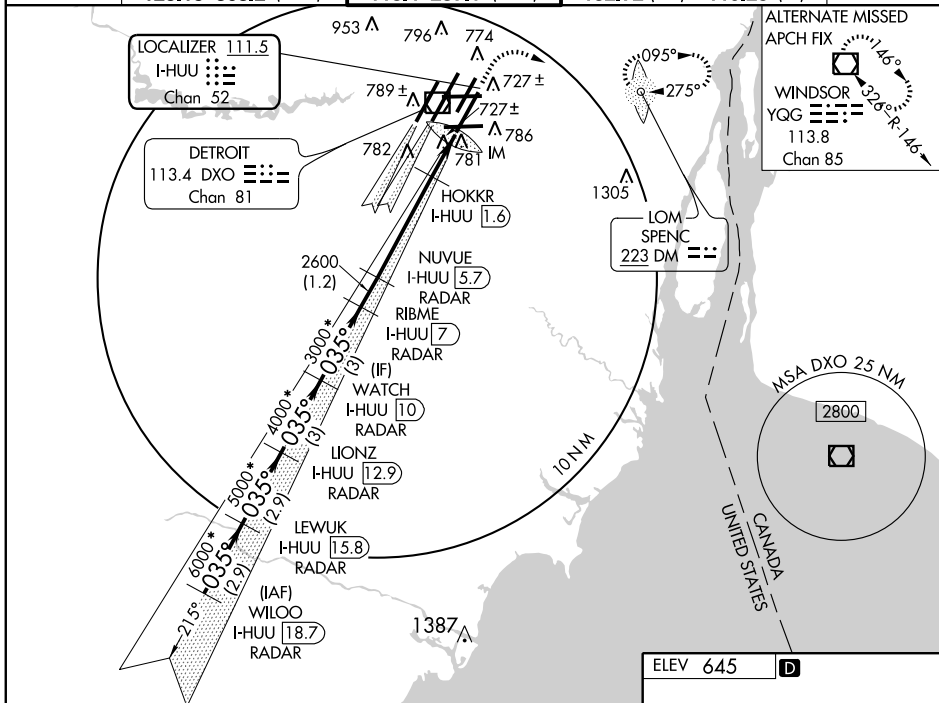
Simultaneous approach authorized with Rwy 4R or Rwy 4L.
ADF and DME or Radar Required.

ALSIF-2

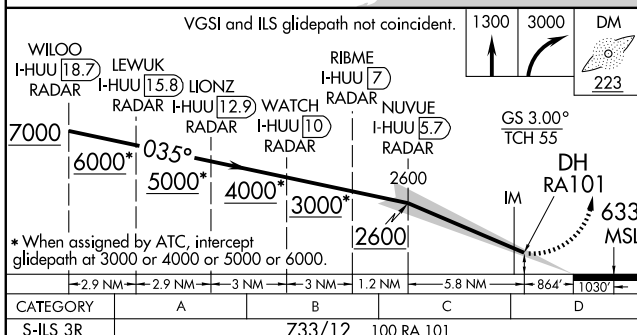


MISSED APPROACH: Climb to
1300 then climbing right turn to
3000 direct SPENC LOM and hold.

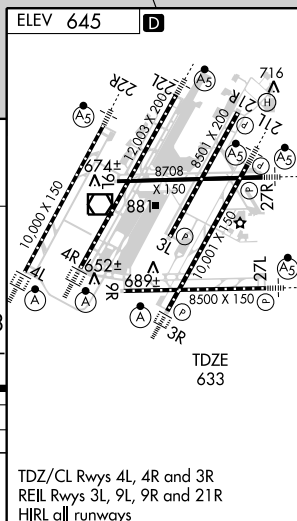
ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST)	GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	CLNC DEL 120.65
------------------------	---	---	--	---------------------------



RADAR REQUIRED



CATEGORY II ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED



TDZ/CL Rwy 4L, 4R and 3R
REIL Rwy 3L, 9L, 9R and 21R
HIRL all runways

LOC/DME I-HUU	APP CRS	Rwy Idg	10001
111.5	035°	TDZE	633
Chan 52		Apt Elev	645

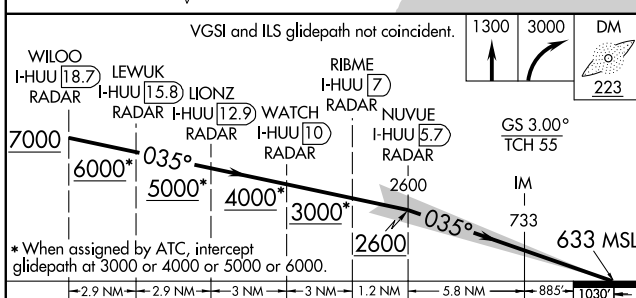
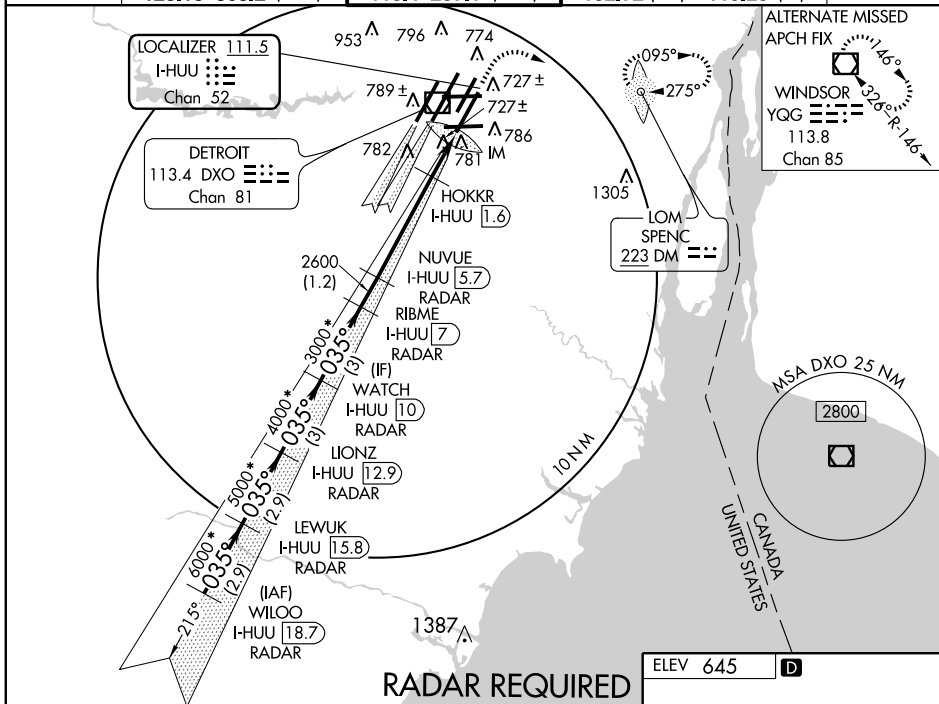
ILS RWY 3R (CAT III) DETROIT METROPOLITAN WAYNE COUNTY (DTW)

Simultaneous approach authorized with Rwy 4R or Rwy 4L.
ADF and DME or Radar Required.



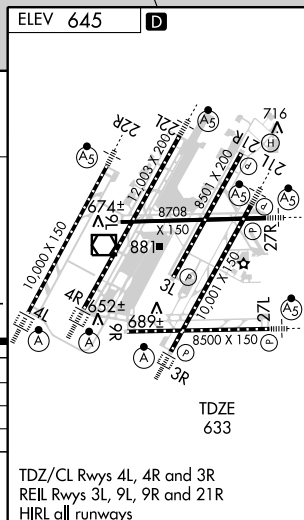
MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct SPENC LOM and hold.

ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST)	GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	CLNC DEL 120.65
-----------------	---	---	--	--------------------



CATEGORY	A	B	C	D
S-ILS 3R		CAT IIIA RVR 07		
S-ILS 3R		CAT IIIB RVR 06		
S-ILS 3R		CAT IIIC NA		

CATEGORY III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED



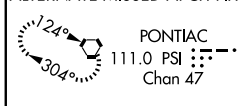
LOC/DME I-DTW 110.7 Chan 44	APP CRS 035°	Rwy Idg 12003 TDZE 638 Apt Elev 645
---	------------------------	--

ILS RWY 4R (CAT II)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

<p>Simultaneous approach authorized with ILS Rwy 3R. ADF and DME or Radar Required.</p>			<p>ALSIF-2 A</p>	<p>MISSED APPROACH: Climb to 3000 then right turn direct MADD5 LOM and hold.</p>	
<p>ATIS 133.675</p>	<p>DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)</p>	<p>METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST)</p>	<p>GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)</p>	<p>CLNC DEL 120.65</p>	

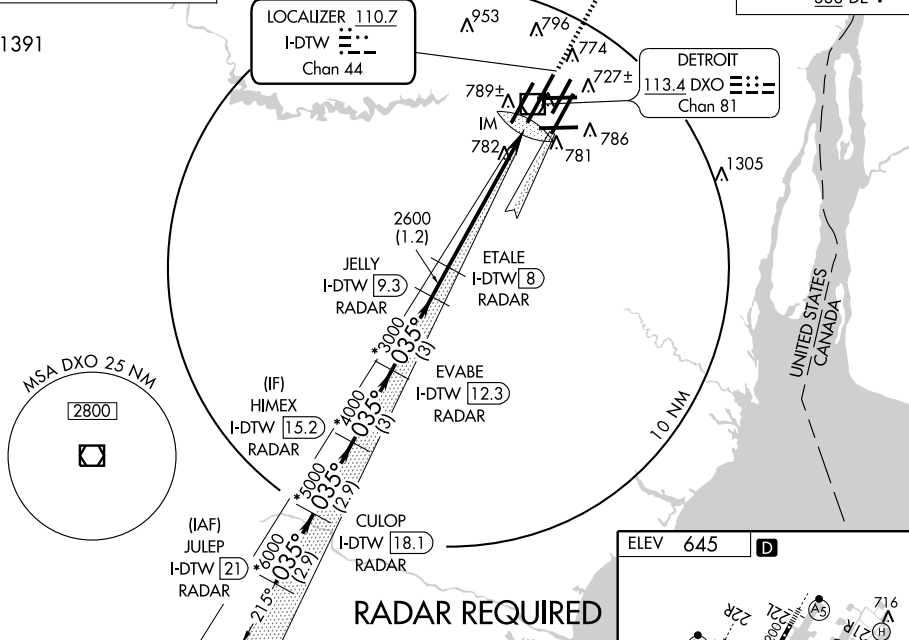
ALTERNATE MISSED APCH FIX



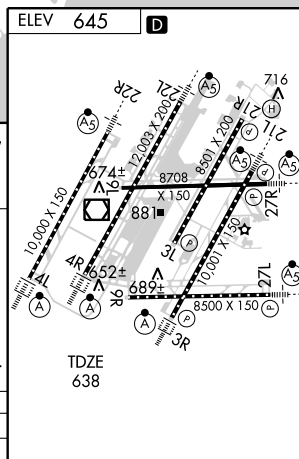
MISSED APCH FIX



A 1391



JULEP I-DTW [21] RADAR	CULOP I-DTW [18.1] RADAR	HIMEX I-DTW [15.2] RADAR	EVABE I-DTW [12.3] RADAR	JELLY I-DTW [9.3] RADAR	ETALE I-DTW [8] RADAR
<p>7000 GS 3.00° TCH 54</p>					
<p>*When assigned by ATC, intercept glidepath at 3000 or 4000 or 5000 or 6000.</p>					
<p>2.9 NM 2.9 NM 3 NM 3 NM 1.2 NM 5.8 NM 891' 1001'</p>					
CATEGORY	A	B	C	D	
S-ILS 4R	738/12 100 RA101				



**CATEGORY II ILS - SPECIAL AIRCREW
& AIRCRAFT CERTIFICATION REQUIRED**

TDZ/CL Rwy's 4L, 4R and 3R
REIL Rwy's 3L, 9L, 9R and 21R
HIRL all runways

LOC/DME I-DTW
110.7
Chan **44**

APP CRS
035°

Rwy Idg
TDZE
Apt Elev
12003
638
645

Simultaneous approach authorized with ILS Rwy 3R.
ADF and DME or Radar Required.

ALSF-2

MISSED APPROACH: Climb to 3000 then
right turn direct MADDS LOM and hold.

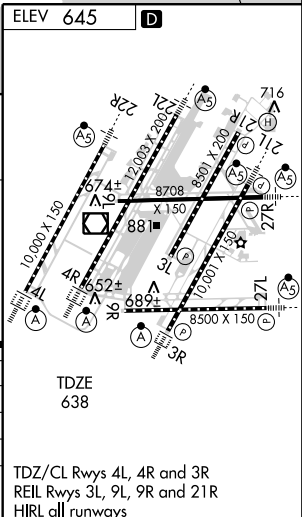
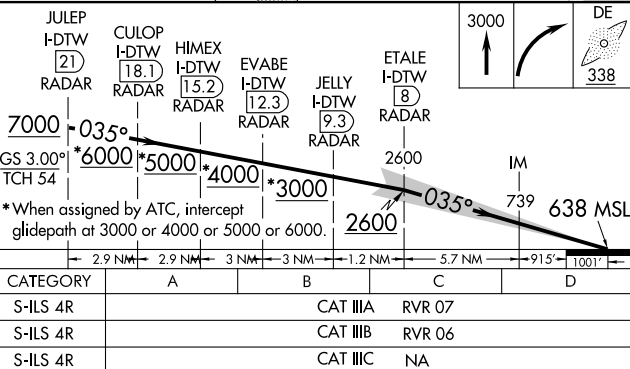
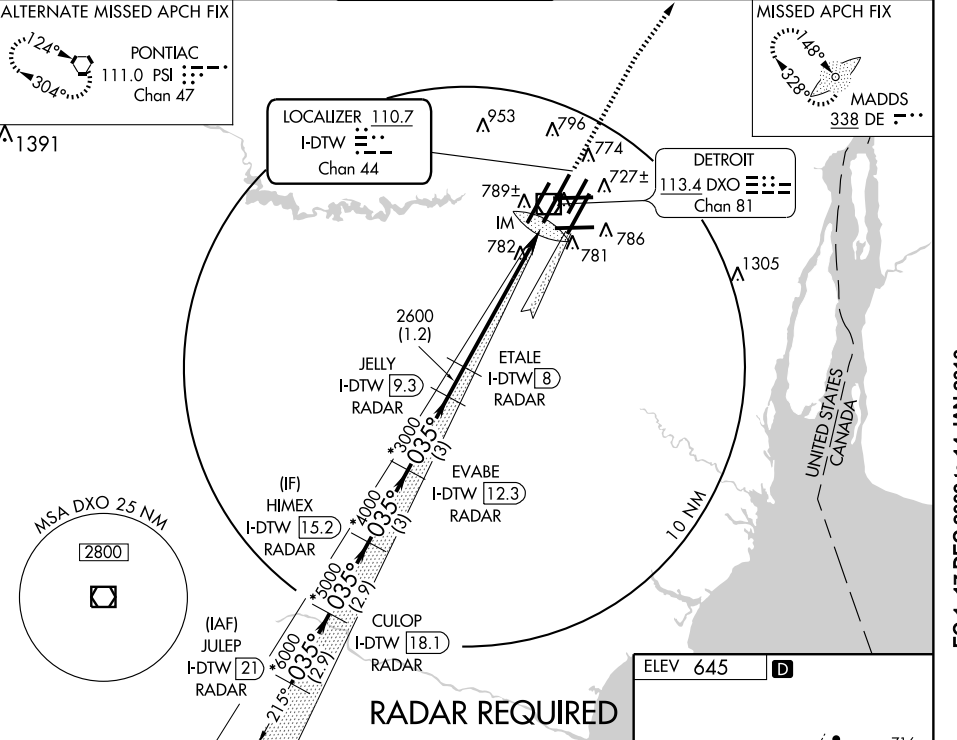
ATIS
133.675

DETROIT APP CON
124.05 363.2 (WEST)
125.15 363.2 (EAST)

METRO TOWER
135.0 287.1 (WEST)
118.4 287.1 (EAST)

GND CON
121.8 (NW) **119.45** (NE)
132.72 (SW) **119.25** (SE)

CLNC DEL
120.65



EC-1: 17 DEC 2009 to 14 JAN 2010

DETROIT, MICHIGAN

AL-119 (FAA)

ILS Y PRM RWY 4L

(SIMULTANEOUS CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-ALA	APP CRS	Rwy Idg	10000
111.75	037°	TDZE	645
Chan 54 (Y)		Apt Elev	645

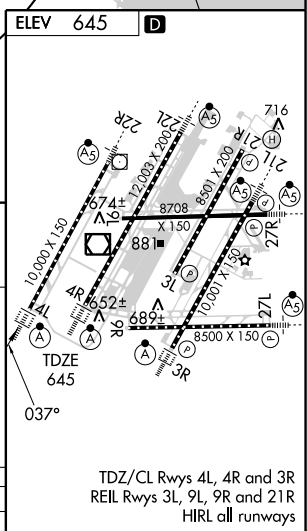
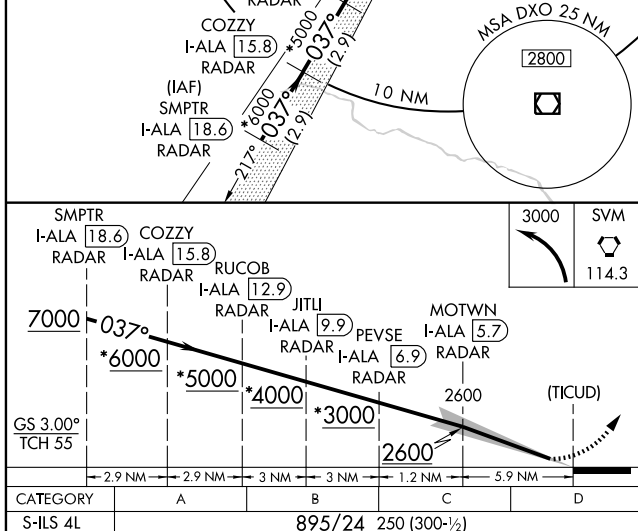
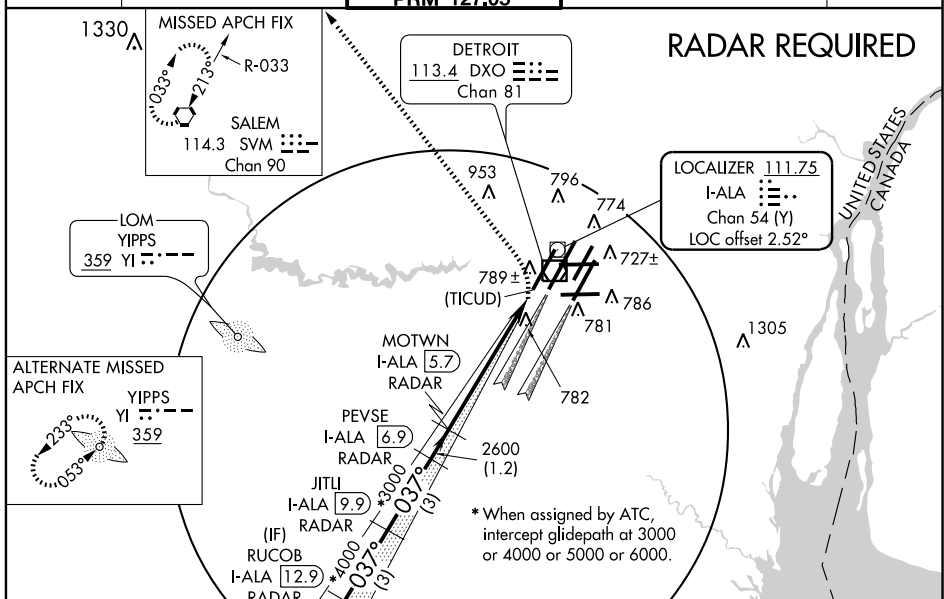
▼ DME or RADAR required. Procedure NA when glideslope not available.
See additional requirements on AAUP. Dual VHF comm required.
Simultaneous close parallel approach authorized with ILS PRM RWY 4R,
ILS PRM Rwy 4R (CAT II), ILS PRM Rwy 4R (CAT III) and ILS PRM Rwy 3R,
ILS PRM Rwy 3R (CAT II), ILS PRM Rwy 3R (CAT III).

ALS-F-2



MISSED APPROACH: Climbing
left turn to 3000 direct SVM
VORTAC and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST) PRM 127.05	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65



ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.
 - Exit the runway at Taxiway A7 (6700 ft) or A8 (7700 ft) whenever practical, see Taxiway Use below.
1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 4L approach. If later advised to expect an ILS 4L Yankee approach, the ILS/PRM 4L chart may be used after completing the following briefing items:
 - (a) Minimums and missed approach procedures are unchanged.
 - (b) Monitor frequency no longer required.
 - (c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 4L Yankee approach.
 2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will ONLY transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.
 3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.
 - (a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstruction clearance. The MVA in the final approach segment is 2400 feet south of Detroit Metropolitan Wayne County Airport.
 - (b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)," the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:
 "TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY,
 HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".
 4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.
 5. **Taxiway Use:** Because of the location of the offset LOC critical area, whenever practical, pilots should exit the runway at taxiway A7, 6700 ft or A8, 7700 ft. If feasible, do not stop on taxiways A9 and A10, or on taxiway A northeast of taxiway V.
- Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

DETROIT, MICHIGAN

AL-119 (FAA)

ILS Y PRM RWY 22R

(SIMULTANEOUS CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-BZB 111.75 Chan 54 (Y)	APP CRS 212°	Rwy Idg TDZE Apt Elev 10000 642 645
--	------------------------	---

DME or RADAR Required. Procedure NA when glideslope not available.
Simultaneous close parallel approach authorized with ILS PRM Rwy 22L
and ILS PRM Rwy 21L. Dual VHF Comm Required.
See additional requirements on AAUP.

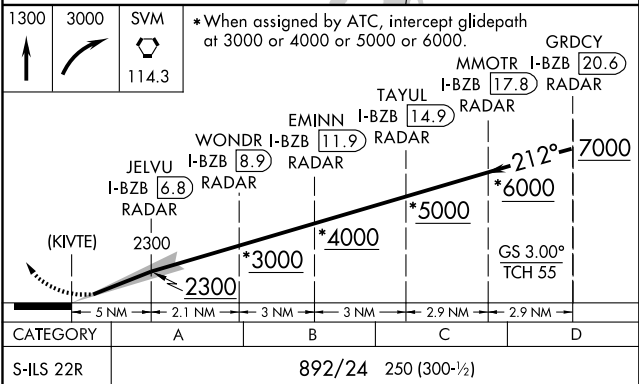
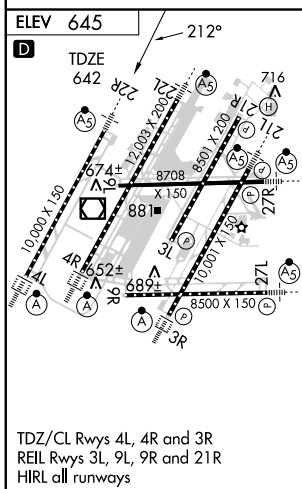
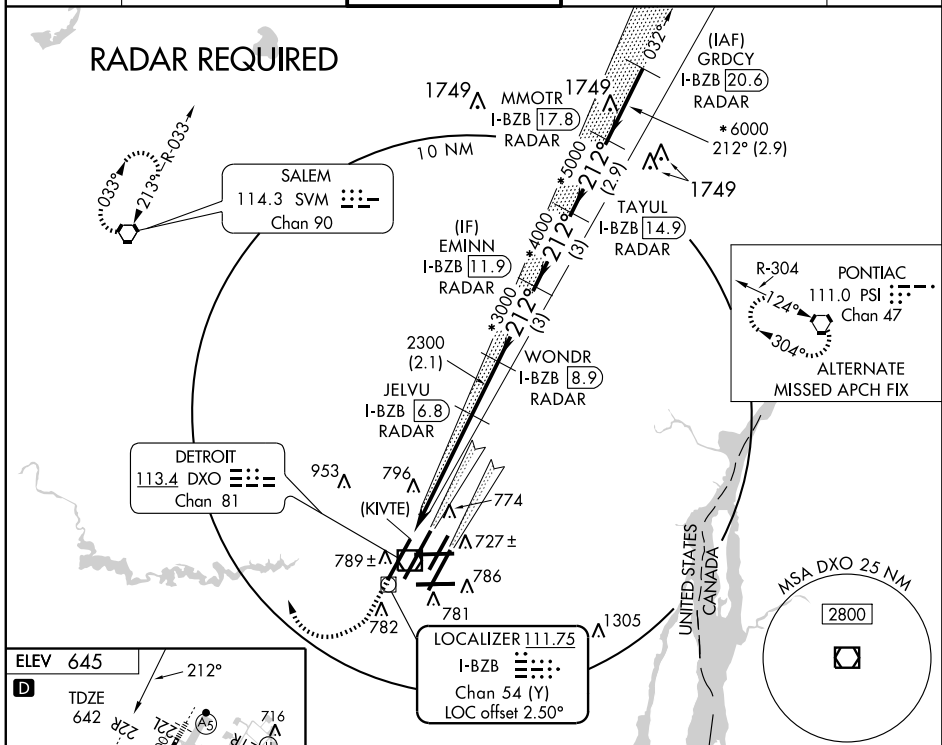
MALSR



MISSED APPROACH: Climb
to 1300 then climbing right
turn to 3000 direct SVM
VORTAC and hold.

ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST) PRM 127.05	GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	CLNC DEL 120.65
------------------------	---	--	--	---------------------------

RADAR REQUIRED



ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)**Condensed Briefing Point:**

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.
- Exit the runway at Taxiway A4 (6700 ft) or A3 (7700 ft) whenever practical, see Exit Taxiway Use below.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 22R approach. If later advised to expect an ILS 22R Yankee approach, the ILS/PRM 22R chart may be used after completing the following briefing items:

- (a) Minimums and missed approach procedures are unchanged.
- (b) Monitor frequency no longer required.
- (c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 22R Yankee approach.

2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will **ONLY** transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.

3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.

- (a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstruction clearance. The MVA in the final approach segment is 2800 feet north of Detroit Metropolitan Wayne County Airport.
- (b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)," the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:
"TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY,
HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".

4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.

5. **Exit Taxiway Use:** Because of the location of the offset LOC critical area, whenever possible, pilots should exit the runway at taxiway A4, 6700 ft or A3, 7700 ft. If practical, do not stop on taxiway A between taxiway A3 and taxiway Q.

Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

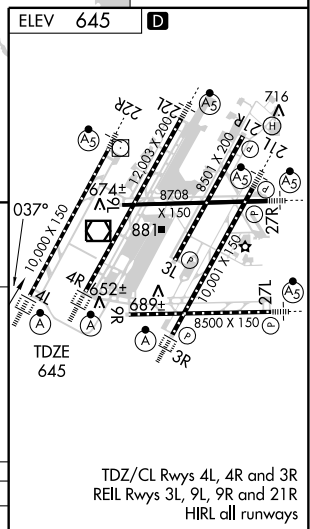
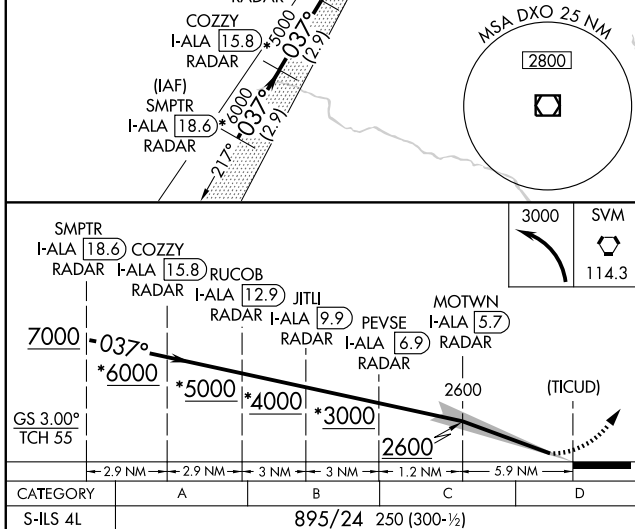
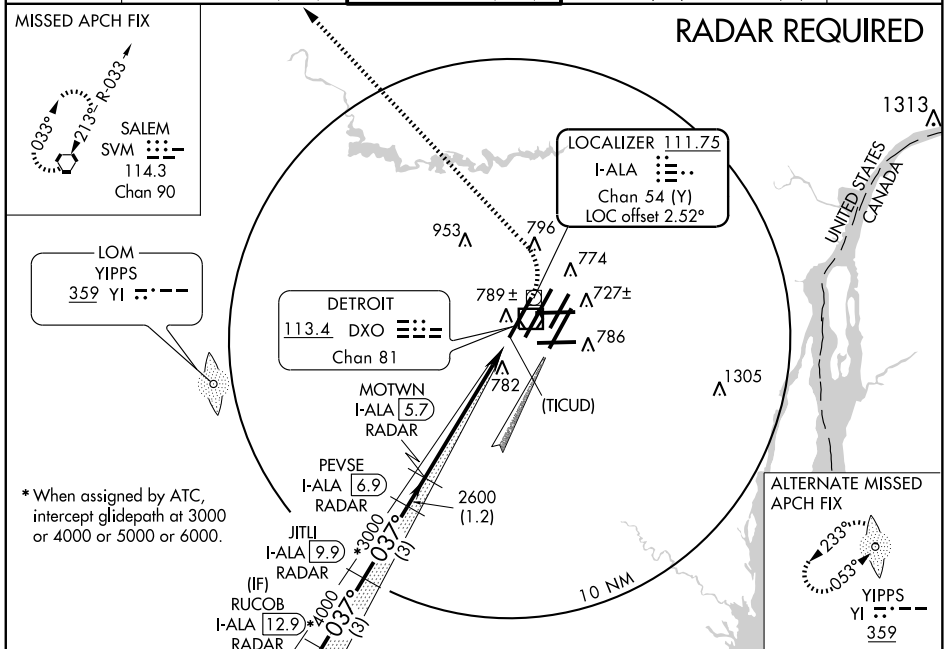
LOC/DME I-ALA 111.75 Chan 54 (Y)	APP CRS 037°	Rwy Idg TDZE Apt Elev	10000 645 645
--	------------------------	-----------------------------	--

ILS Y RWY 4L

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

<p>▼ DME or RADAR REQUIRED. LOC procedure NA during simultaneous operations. Simultaneous approach authorized with Rwy 3R. Procedure NA when glideslope not available.</p>	<p>ALSF-2 </p>	<p>MISSED APPROACH: Climbing left turn to 3000 direct SVM VORTAC and hold.</p>
---	--------------------	--

<p>ATIS 133.675</p>	<p>DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)</p>	<p>METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST)</p>	<p>GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)</p>	<p>CLNC DEL 120.65</p>
--------------------------------	--	--	---	-----------------------------------



▼

DME or RADAR REQUIRED.
Simultaneous approach authorized with Rwy 21L.
Procedure NA when glideslope not available.
LOC procedure NA during simultaneous operations.

MALSR

MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct SVM VORTAC and hold.

ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST)	GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	CLNC DEL 120.65
-----------------	---	---	--	--------------------

RADAR REQUIRED

SALEM
114.3 SVM
Chan 90

DETROIT
113.4 DXO
Chan 81

LOCALIZER 111.75
I-BZB
Chan 54 (Y)
LOC offset 2.50°

MMOTR I-BZB 17.8 RADAR

TAYUL I-BZB 14.9 RADAR

EMINN I-BZB 11.9 RADAR

WONDR I-BZB 8.9 RADAR

JELVU I-BZB 6.8 RADAR

GRDCY I-BZB 20.6 RADAR

PONTIAC PSI 111.0 Chan 47

MSA DXO 25 NM

ELEV 645

212°

TDZE 642

22R

716

711

707

703

699

695

691

687

683

679

675

671

667

663

659

655

651

647

643

639

635

631

627

623

619

615

611

607

603

599

595

591

587

583

579

575

571

567

563

559

555

551

547

543

539

535

531

527

523

519

515

511

507

503

499

495

491

487

483

479

475

471

467

463

459

455

451

447

443

439

435

431

427

423

419

415

411

407

403

399

395

391

387

383

379

375

371

367

363

359

355

351

347

343

339

335

331

327

323

319

315

311

307

303

299

295

291

287

283

279

275

271

267

263

259

255

251

247

243

239

235

231

227

223

219

215

211

207

203

199

195

191

187

183

179

175

171

167

163

159

155

151

147

143

139

135

131

127

123

119

115

111

107

103

99

95

91

87

83

79

75

71

67

63

59

55

51

47

43

39

35

31

27

23

19

15

11

7

3

0

1300

3000

SVM

114.3

* When assigned by ATC, intercept glidepath at 3000 or 4000 or 5000 or 6000.

GRDCY I-BZB 20.6 RADAR

MMOTR I-BZB 17.8 RADAR

TAYUL I-BZB 14.9 RADAR

EMINN I-BZB 11.9 RADAR

WONDR I-BZB 8.9 RADAR

JELVU I-BZB 6.8 RADAR

(KIVTE)

2300

*3000

*4000

*5000

*6000

7000

212°

GS 3.00° TCH 55

5 NM

2.1 NM

3 NM

3 NM

2.9 NM

2.9 NM

CATEGORY	A	B	C	D
S-ILS 22R	892/24 250 (300-½)			

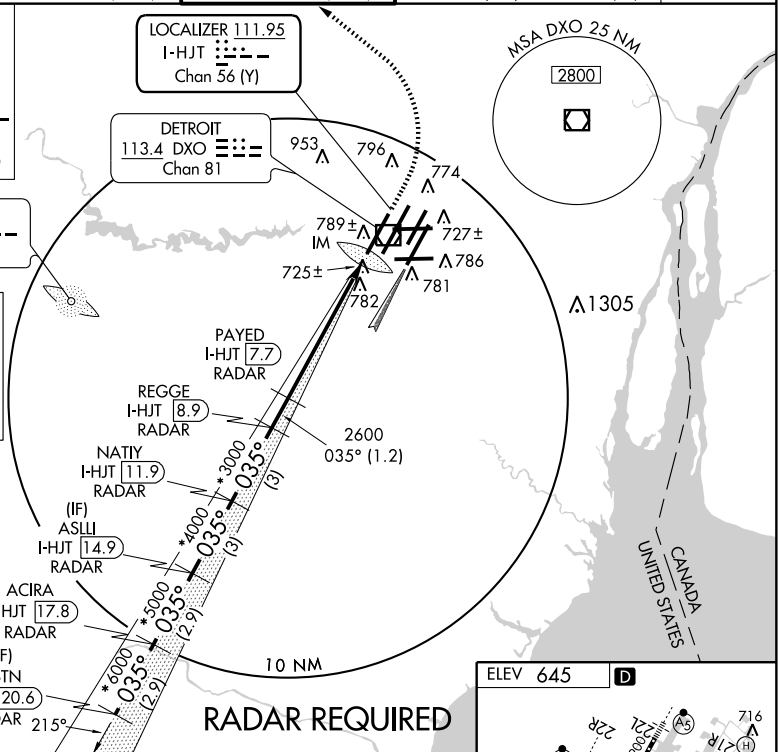
TDZ/CL Rwy 4L, 4R and 3R
REIL Rwy 3L, 9L, 9R and 21R
HIRL all runways

EC-1, 17 DEC 2009 to 14 JAN 2010

ILS Z or LOC RWY 4L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

MISSED APPROACH: Climb to 1300 then climbing left turn to 3000 direct SVM VORTAC and hold.

MISSED APCH FIX



RADAR REQUIRED

7000

035°

* 6000 * 5000 * 4000 * 3000 2600 2600

GS 3.00° TCH 52

2.9 NM 2.9 NM 3 NM 3 NM 1.2 NM 4.9 0.8 0.1

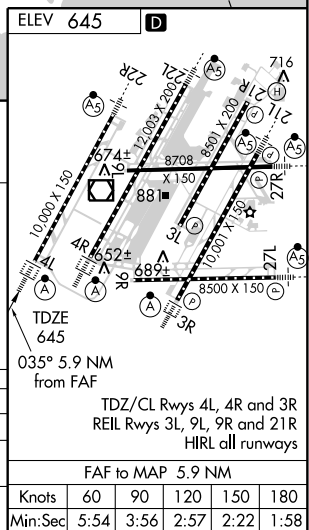
NBSTN I-HJT 20.6 ACIRA I-HJT 17.8 ASLI I-HJT 14.9 NATI I-HJT 11.9 REGGE I-HJT 8.9 PAYED I-HJT 7.7 I-HJT 1.8

RADAR RADAR RADAR RADAR RADAR RADAR RADAR

* When assigned by ATC, intercept glidepath at 3000 or 4000 or 5000 or 6000.

1300 3000 SVM 114.3

CATEGORY	A	B	C	D
S-ILS 4L	845/18 200 (200-½)			
S-LOC 4L	1000/24 355 (400-½)			1000/40 355 (400-¾)
CIRCLING	1200-1 555 (600-1)		1200-1½ 555 (600-1½)	1200-2 555 (600-2)



LOC/DME I-JKI	APP CRS	Rwy Idg	10,000
111.95	215°	TDZE	642
Chan 56 (Y)		Apt Elev	645

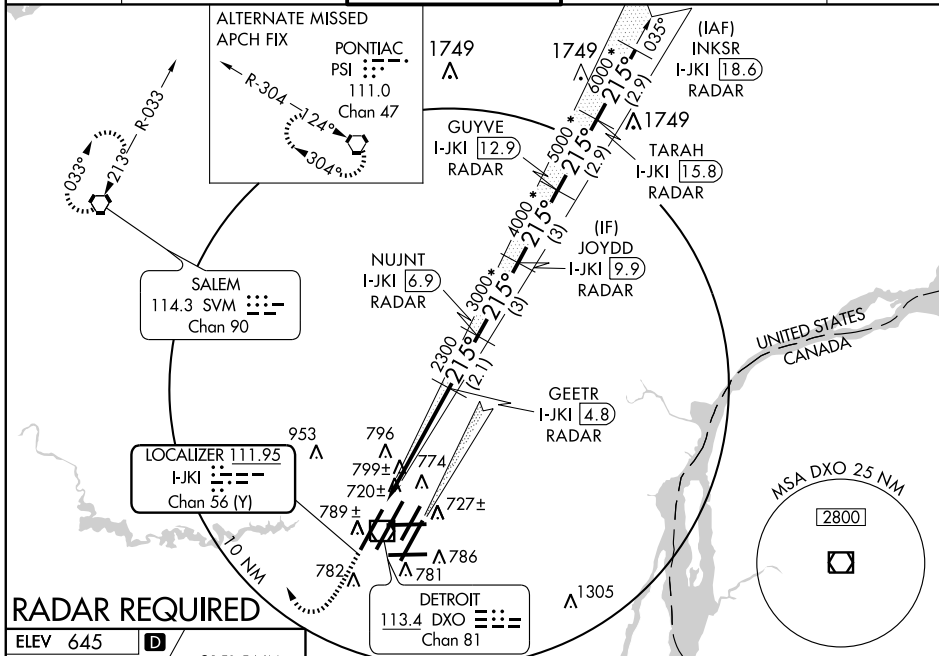
ILS Z or LOC RWY 22R DETROIT METROPOLITAN WAYNE COUNTY (DTW)

Simultaneous approach authorized with Rwy 21L.
 **RVR 1800 authorized with the use of FD or AP or HUD to DA.
 DME or RADAR Required. LOC procedure NA during simultaneous operations.



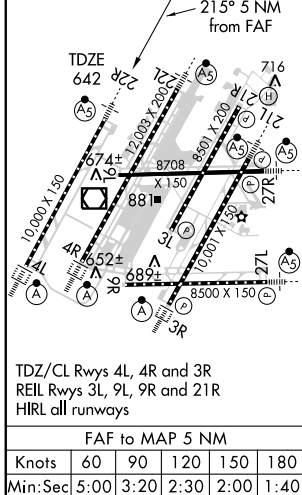
MISSED APPROACH: Climb to 1300 then climbing right turn via heading 225° to 3000 then right turn direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65



RADAR REQUIRED

ELEV 645	D
----------	---



1300	3000	SVM	* When assigned by ATC, intercept glidepath at 3000 or 4000 or 5000 or 6000.
↑	HDG 225°	114.3	
JOYDD I-JKI 9.9 RADAR	GEETR I-JKI 4.8 RADAR	TARAH I-JKI 15.8 RADAR	INKSR I-JKI 18.6 RADAR
I-JKI 1.0	I-JKI 12.9	I-JKI 15.8	I-JKI 18.6
2300	2300	3000*	4000*
5000*	6000*	7000	
GS 3.00° TCH 55			
1.1	3.9 NM	2.1 NM	3 NM
3 NM	2.9 NM	2.9 NM	
CATEGORY	A	B	C
S-ILS 22R	**842/24 200 (200-½)		
S-LOC 22R	1060/24 418 (500-½)	1060/40 418 (500-¾)	
CIRCLING	1200-1 555 (600-1)	1200-1½ 555 (600-1½)	1200-2 555 (600-2)

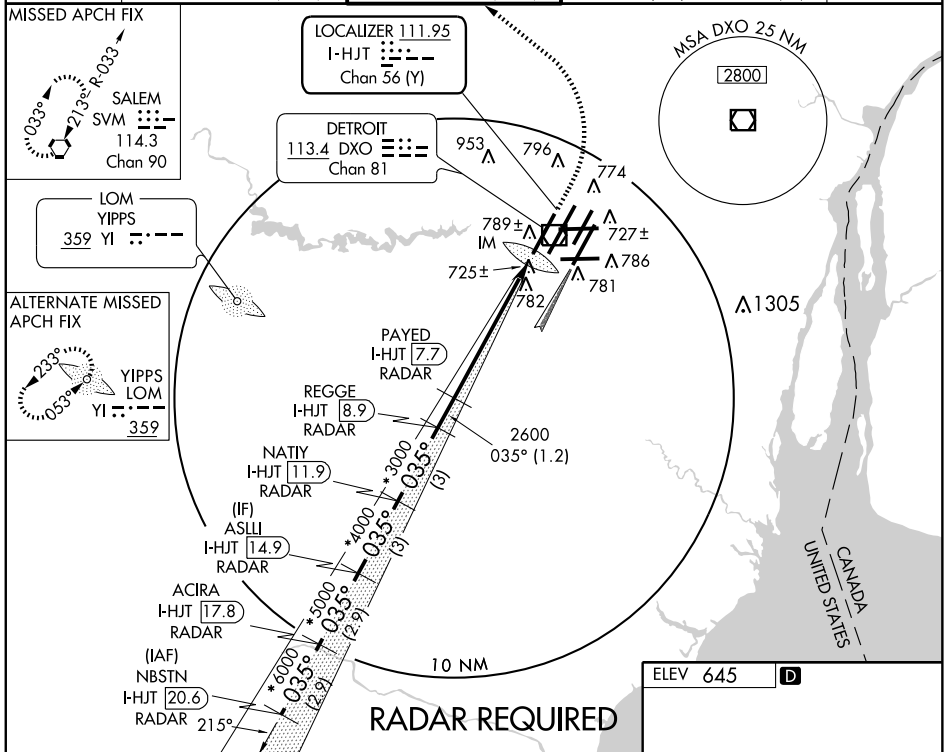
LOC/DME I-HJT	APP CRS	Rwy Idg	10,000
111.95	035°	TDZE	645
Chan 56 (Y)		Apt Elev	645

ILS Z RWY 4L (CAT II)

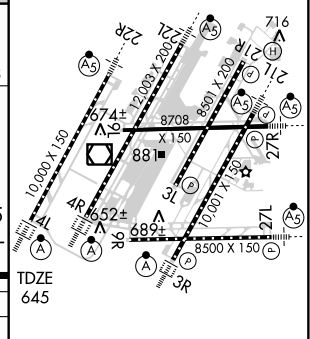
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

<p>Simultaneous approach authorized with Rwy 3R. DME or RADAR Required.</p>	<p>ALSF-2</p>	<p>MISSED APPROACH: Climb to 1300 then climbing left turn to 3000 direct SVM VORTAC and hold.</p>
--	---------------	---

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 132.72 (SW) 119.45 (NE) 119.25 (SE)	120.65



7000	6000	5000	4000	3000	2600	645
NBSTN I-HJT 20.6 RADAR	ACIRA I-HJT 17.8 RADAR	ASLI I-HJT 14.9 RADAR	NATY I-HJT 11.9 RADAR	REGGE I-HJT 8.9 RADAR	PAYED I-HJT 7.7 RADAR	IM
GS 3.00° TCH 52						
2.9 NM	2.9 NM	3 NM	3 NM	1.2 NM	5.7	918'
CATEGORY	A	B	C	D		
S-ILS 4L		745/12	100 RA 101			



CATEGORY II ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

TDZ/CL Rwy 4L, 4R and 3R
REIL Rwy 3L, 9L, 9R and 21R
HIRL all runways

LOC/DME I-HJT	APP CRS	Rwy Idg	10,000
111.95	035°	TDZE	645
Chan 56 (Y)		Apt Elev	645

ILS Z RWY 4L (CAT III)

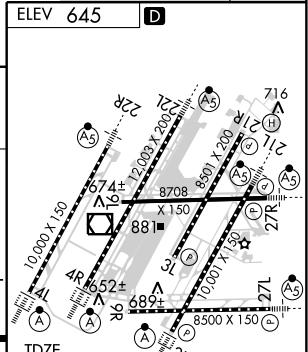
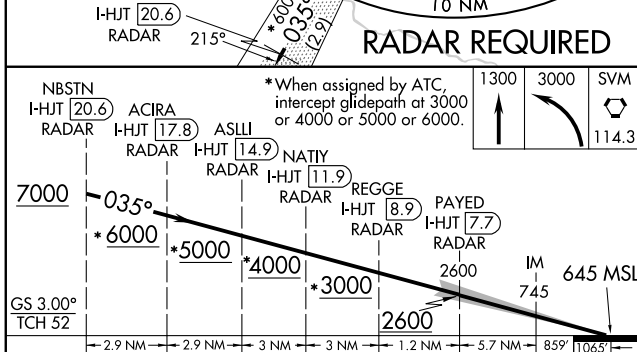
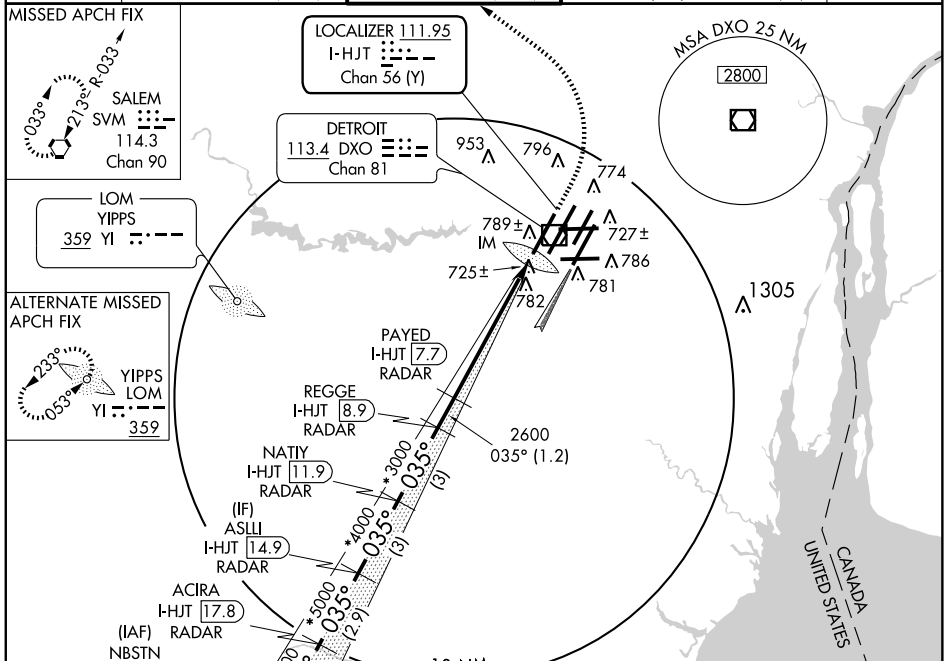
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

Simultaneous approach authorized with Rwy 3R.
DME or RADAR Required.



MISSED APPROACH: Climb to 1300 then climbing
left turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65



CATEGORY	A	B	C	D
S-ILS 4L		CAT IIIA	RVR 07	
S-ILS 4L		CAT IIIB	RVR 06	
S-ILS 4L		CAT IIIC	NA	

ELEV 645	D
TDZE 645	

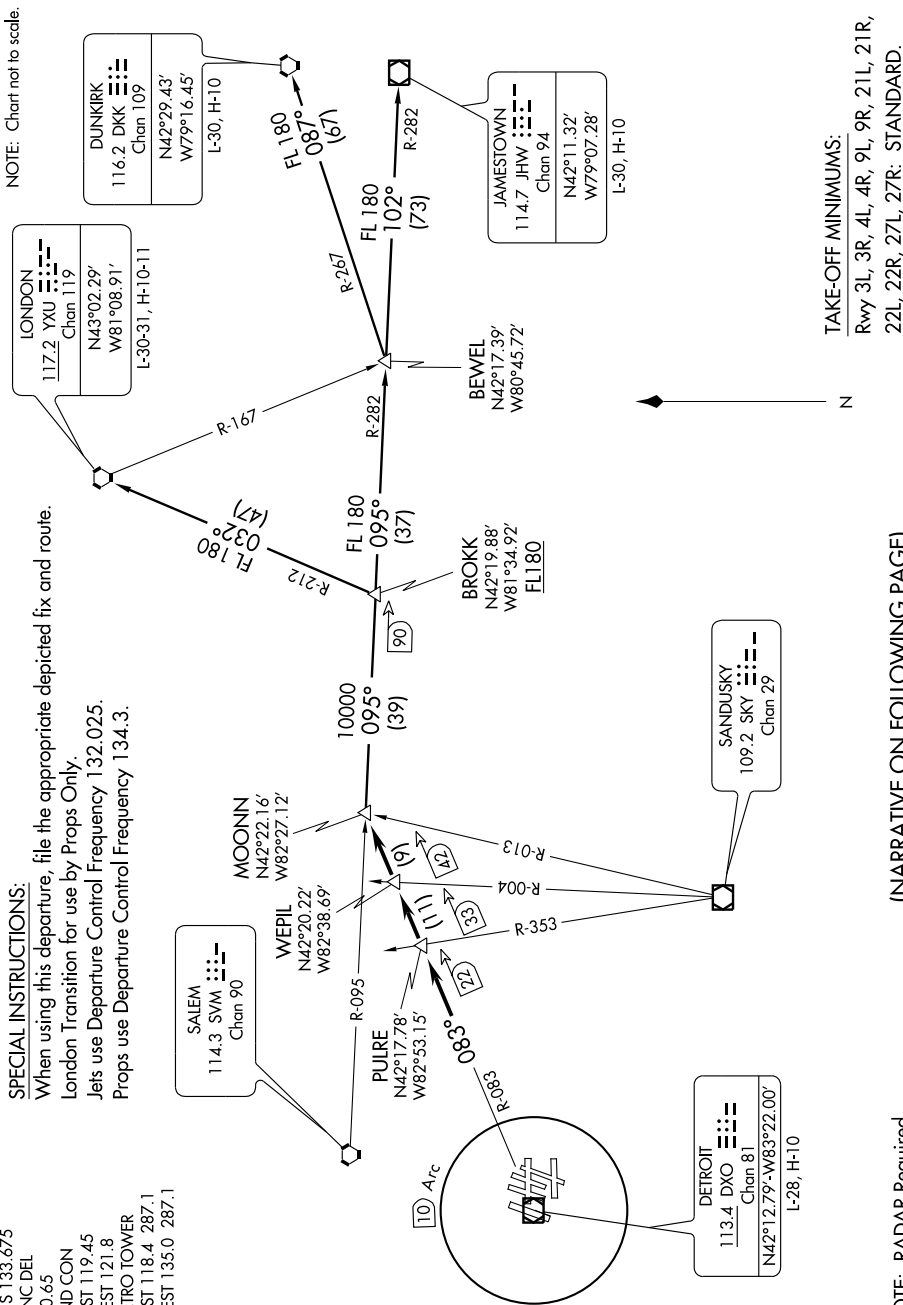
TDZ/CL Rwy 4L, 4R and 3R
REIL Rwy 3L, 9L, 9R and 21R
HIRL all runways

MOONN TWO DEPARTURE

SL-119 (FAA)

DETROIT, MICHIGAN

NOTE: Chart not to scale.



TAKE-OFF MINIMUMS:

Rwy 3L, 3R, 4L, 4R, 9L, 9R, 21L, 21R,
22L, 22R, 27L, 27R: STANDARD.

NOTE: RADAR Required.

(NARRATIVE ON FOLLOWING PAGE)

EC-1. 17 DEC 2009 to 14 JAN 2010



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to intercept DXO VOR/DME R-083 to MOONN INT, then via (transition). Jets maintain 10,000 feet, cross DXO VOR/DME 10 DME at or above 5,000 feet for noise abatement. If unable to comply, advise ATC prior to departure. Props maintain 4,000 feet or lower assigned altitude. Expect clearance to filed altitude/flight level ten (10) minutes after departure.

DUNKIRK TRANSITION (MOONN2.DKK): From over MOONN INT via SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to BEWEL INT, then via DKK R-267 to DKK VORTAC.

JAMESTOWN TRANSITION (MOONN2.JHW): From over MOONN INT via SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to BEWEL INT, then via JHW R-282 to JHW VOR/DME.

LONDON TRANSITION (MOONN2.YXU): From over MOONN INT via SVM R-095 to BROKK INT, then via YXU R-212 to YXU VORTAC.

TAKE-OFF OBSTACLES

Rwy 3R: Headwall 399' from DER, 566' right of centerline, 17' AGL/647' MSL.

Rwy 4L: Multiple transmission towers 1516' from DER, 827' left of centerline, up to 60' AGL/690' MSL.

Multiple antennas 2751' from DER, 762' right of centerline, up to 84' AGL/714' MSL.

Rwy 4R: Antenna on building 3348' from DER, 1301' left of centerline, 100' AGL/736' MSL.

Rwy 9L: Multiple trees 968' to 2519' from DER, 462' left of centerline and 1173' right of centerline, up to 85' AGL/715' MSL.

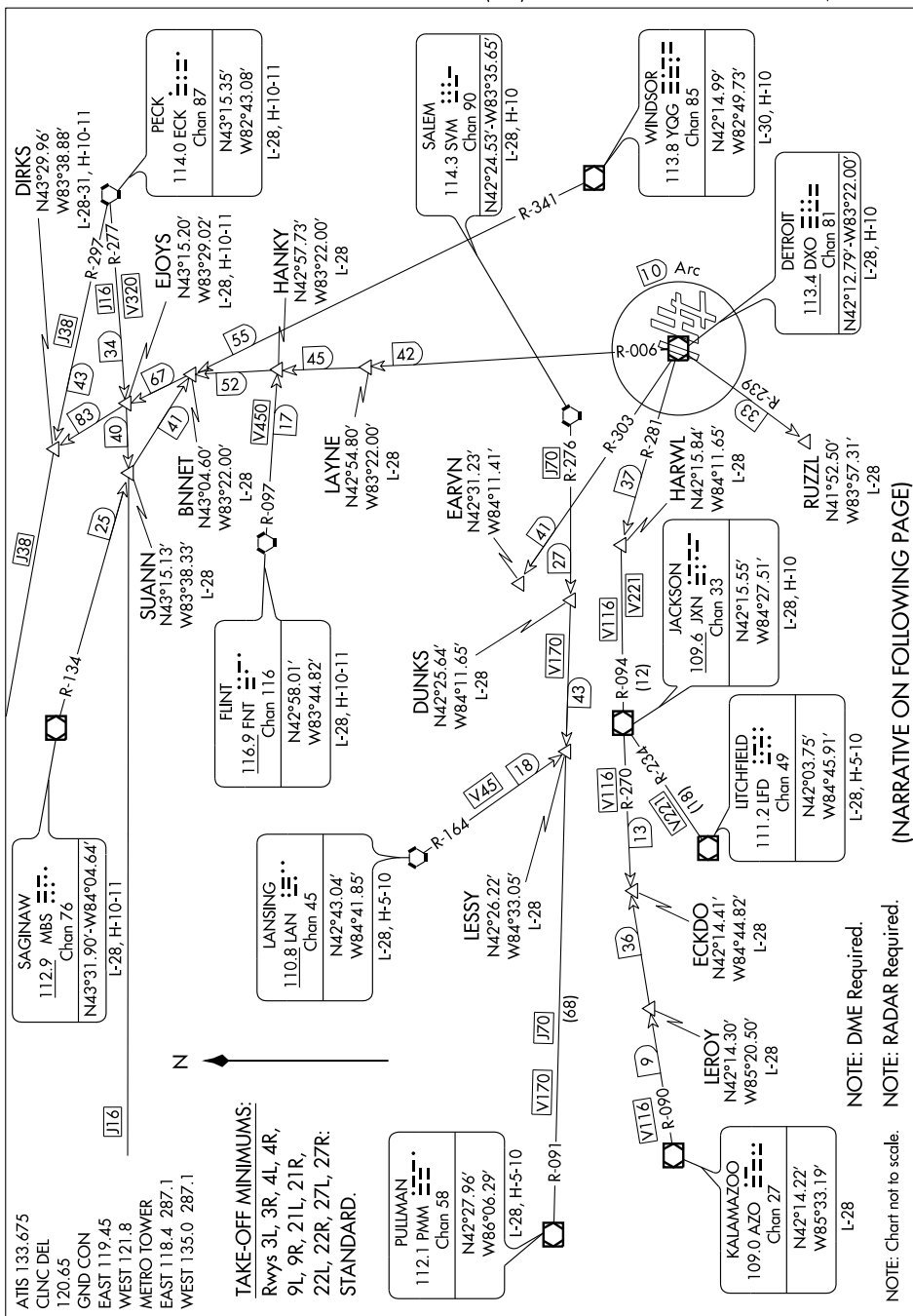
Rwy 9R: Tree 1837' from DER, 947' right of centerline, 50' AGL/686' MSL.

Rwy 21L: Multiple trees 1079' to 3910' from DER, 586' left of centerline and 1188' right of centerline, up to 100' AGL/733' MSL.

Rwy 22L: Multiple trees 794' to 3694' from DER, 611' right of centerline and 1381' left of centerline, up to 110' AGL/740' MSL.

Rwy 27R: Rod on ASR 4461' from DER, 464' left of centerline, 106' AGL/756' MSL.

PALACE THREE DEPARTURE



PALACE THREE DEPARTURE

SL-119 (FAA)

DETROIT, MICHIGAN



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to join the assigned Airway or Radial then proceed to the assigned departure fix, thence via the assigned route. Jets maintain 10,000 feet, cross the DXO VOR/DME 10 DME Arc at or above 5,000 feet for noise abatement. If unable to comply, advise ATC prior to departure. Props maintain 4,000 feet or lower assigned altitude. Expect clearance to filed altitude/flight level ten (10) minutes after departure.

SPECIAL INSTRUCTIONS:

When using this departure, file the appropriate depicted departure fix and route. Aircraft landing/overflying Lansing (LAN) or overflying Flint (FNT) at 10,000 feet or below, file via EARNV. Aircraft landing Flint (FNT) at 10,000 feet or below, file via LAYNE. Aircraft landing/overflying Toledo (TOL) at 10,000 feet or below, file via RUZZL. Aircraft over HARWL must file FL220 and below. Prop aircraft departing Rwy 21L/R and 22L/R westbound cross DXO 3.5 DME at or above 2500 MSL. If unable advise ATC prior to departure. Jets use Departure Control Frequency 125.525. Props use Departure Control Frequency 118.95.

TAKE-OFF OBSTACLES

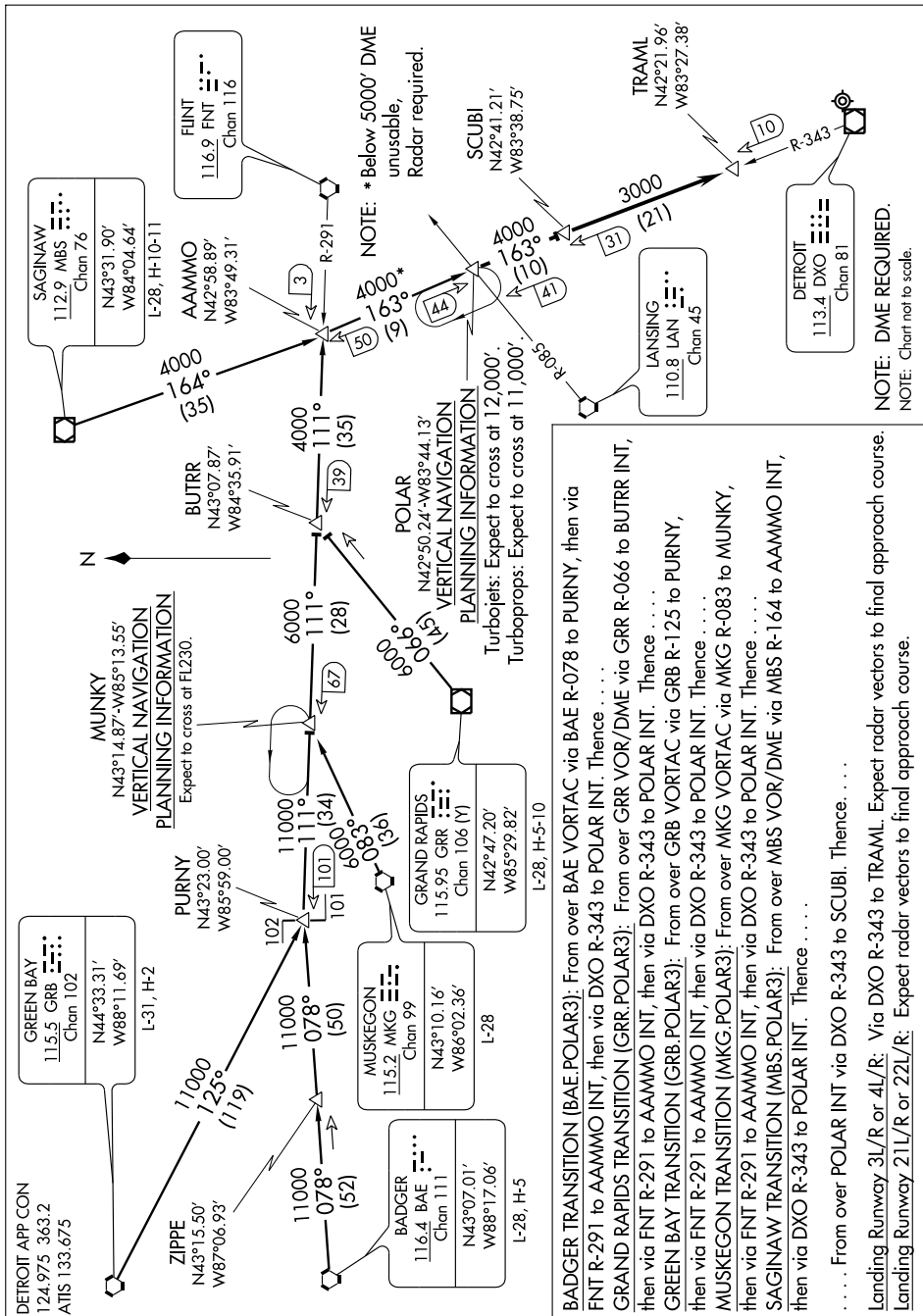
- Rwy 3R: Headwall 399' from DER, 566' right of centerline, 17' AGL/647' MSL.
- Rwy 4L: Multiple transmission towers 1516' from DER, 827' left of centerline, up to 60' AGL/690' MSL.
Multiple antennas 2751' from DER, 762' right of centerline, up to 84' AGL/714' MSL.
- Rwy 4R: Antenna on building 3348' from DER, 1301' left of centerline, 100' AGL/736' MSL.
- Rwy 9L: Multiple trees 968' to 2519' from DER, 462' left of centerline and 1173' right of centerline, up to 85' AGL/715' MSL.
- Rwy 9R: Tree 1837' from DER, 947' right of centerline, 50' AGL/686' MSL.
- Rwy 21L: Multiple trees 1079' to 3910' from DER, 586' left of centerline and 1188' right of centerline, up to 100' AGL/733' MSL.
- Rwy 22L: Multiple trees 794' to 3694' from DER, 611' right of centerline and 1381' left of centerline, up to 110' AGL/740' MSL.
- Rwy 27R: Rod on ASR, 4461' from DER, 464' left of centerline, 106' AGL/756' MSL.

(POLAR).POLAR3) 092925

POLAR THREE ARRIVAL

ST-119 (FAA)

DETROIT METROPOLITAN WAYNE COUNTY
DETROIT, MICHIGAN



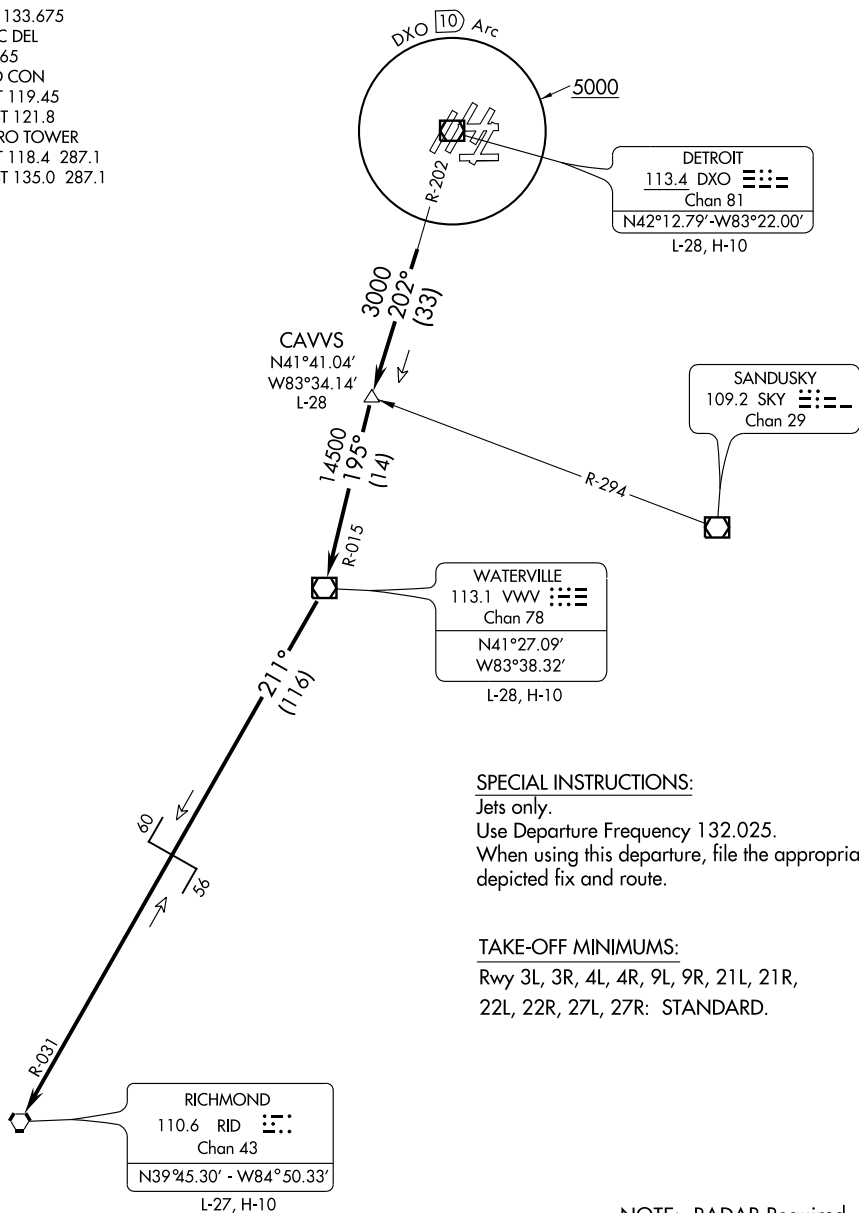
EC-1, 17 DEC 2009 to 14 JAN 2010

RICHMOND FOUR DEPARTURE

SL-119 (FAA)

DETROIT, MICHIGAN

ATIS 133.675
CLNC DEL
120.65
GND CON
EAST 119.45
WEST 121.8
METRO TOWER
EAST 118.4 287.1
WEST 135.0 287.1

SPECIAL INSTRUCTIONS:

Jets only.

Use Departure Frequency 132.025.

When using this departure, file the appropriate depicted fix and route.

TAKE-OFF MINIMUMS:

Rwy 3L, 3R, 4L, 4R, 9L, 9R, 21L, 21R,
22L, 22R, 27L, 27R: STANDARD.

NOTE: RADAR Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to intercept DXO VOR/DME R-202 to CAVVS INT/DXO 33 DME, then via VWV R-015 to VWV VOR/DME. Then right turn via VWV R-211 and RID R-031 to RID VORTAC. Maintain 10,000 feet, cross DXO 10 DME at or above 5,000 feet for noise abatement. If unable to comply, advise ATC prior to departure. Expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

- Rwy 3R: Headwall 399' from DER, 566' right of centerline, 17' AGL/647' MSL.
- Rwy 4L: Multiple transmission towers 1516' from DER, 827' left of centerline, up to 60' AGL/690' MSL.
Multiple antennas 2751' from DER, 762' right of centerline, up to 84' AGL/714' MSL.
- Rwy 4R: Antenna on building 3348' from DER, 1301' left of centerline, 100' AGL/736' MSL.
- Rwy 9L: Multiple trees 968' to 2519' from DER, 462' left of centerline and 1173' right of centerline, up to 85' AGL/715' MSL.
- Rwy 9R: Tree 1837' from DER, 947' right of centerline, 50' AGL/686' MSL.
- Rwy 21L: Multiple trees 1079' to 3910' from DER, 586' left of centerline and 1188' right of centerline, up to 100' AGL/733' MSL.
- Rwy 22L: Multiple trees 794' to 3694' from DER, 611' right of centerline and 1381' left of centerline, up to 110' AGL/740' MSL.
- Rwy 27R: Rod on ASR, 4461' from DER, 464' left of centerline, 106' AGL/756' MSL.

WAAS CH 61304 W03A	APP CRS 035°	Rwy Idg TDZE 10001 Apt Elev 633 645
--	------------------------	---

RNAV (GPS) RWY 3R

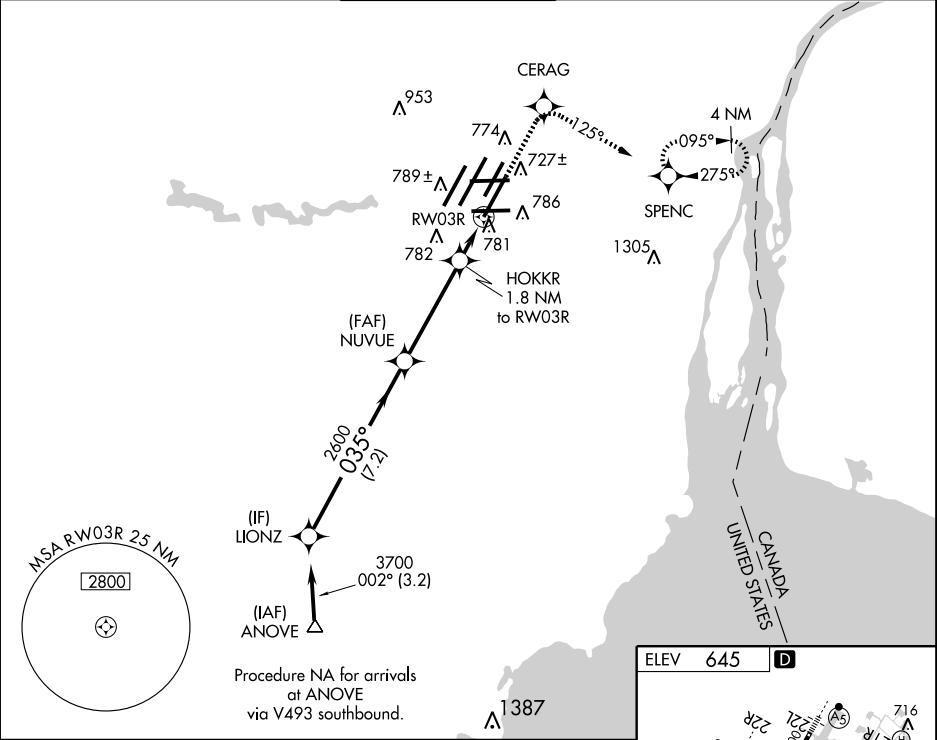
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

▼ For inoperative ALSF-2, increase LPV all Cats visibility to RVR 5000.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.

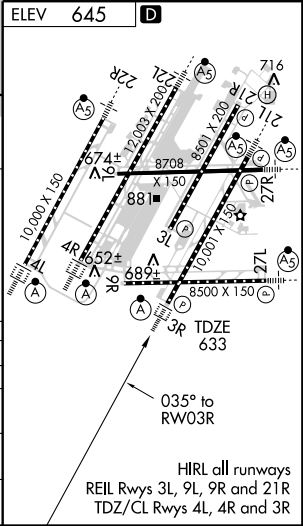
ALSF-2

MISSED APPROACH: Climb to 3000 direct CERAG and right turn via 125° track to SPENC and hold, continue climb-in-hold to 3000.

ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST)	GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	CLNC DEL 120.65
------------------------	---	---	--	---------------------------



LIONZ		VGS1 and RNAV glidepath not coincident.		3000	CERAG	SPENC
3700		NUVUE		HOKKR 1.8 NM to RWY03R		
Procedure Turn NA		035°		*1.1 NM to RWY03R RWY03R		
GS 3.00°		2600		*1240		
TCH 55		7.2 NM		4.1 NM		
CATEGORY		A		B		D
LPV DA		957/24		324 (400-½)		
LNAV/VNAV DA		1031/40		398 (400-¾)		
LNAV MDA		1060/24 427 (500-½)		1060/40 427 (500-¾)		1060/50 427 (500-1)
CIRCLING		1200-1 555 (600-1)		1200-1½ 555 (600-1½)		1200-2 555 (600-2)



WAAS CH 77520 W04A	APP CRS 035°	Rwy Idg 10000 TDZE 645 Apt Elev 645
--	------------------------	--

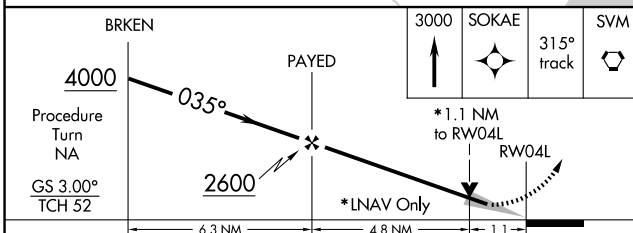
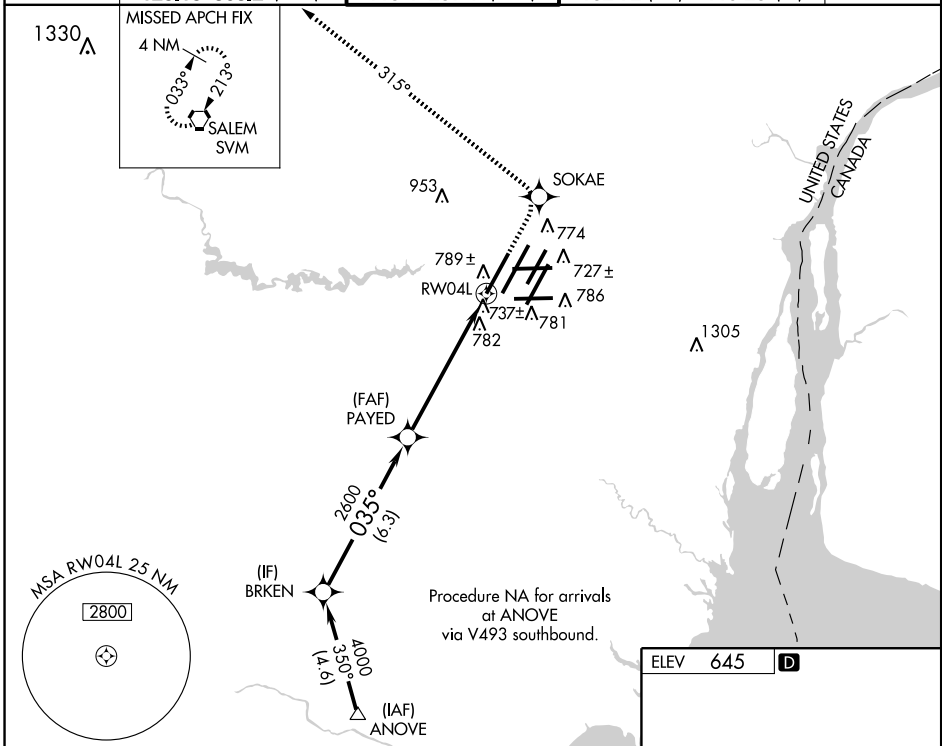
RNAV (GPS) RWY 4L

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

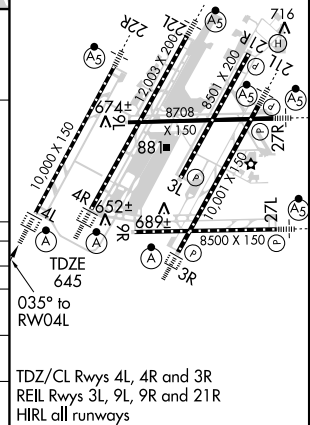
T For inoperative ALSF-2, increase LPV all Cats visibility to RVR 5000, increase LNAV Cat D visibility to RVR 6000. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.6°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.

ALSF-2 MISSED APPROACH: Climb to 3000 direct SOKAE and via 315° track to SVM VORTAC and hold.

ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST)	GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	CLNC DEL 120.65
-----------------	---	---	--	--------------------



CATEGORY	A	B	C	D
LPV DA	916/24 271 (300-½)			
LNAV/ VNAV DA	1008/40 363 (400-¾)			
LNAV MDA	1040/24 395 (400-½)			1040/50 395 (400-1)
CIRCLING	1200-1 555 (600-1)		1200-1½ 555 (600-1½)	1200-2 555 (600-2)



WAAS CH 63004 W04A	APP CRS 035°	Rwy Idg TDZE Apt Elev	12003 638 645
--	------------------------	-----------------------------	--

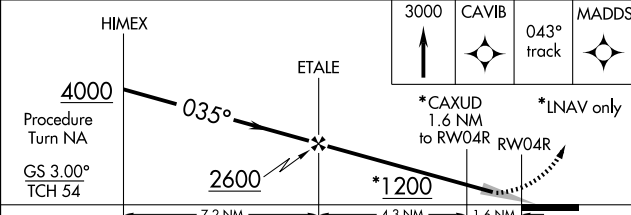
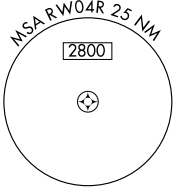
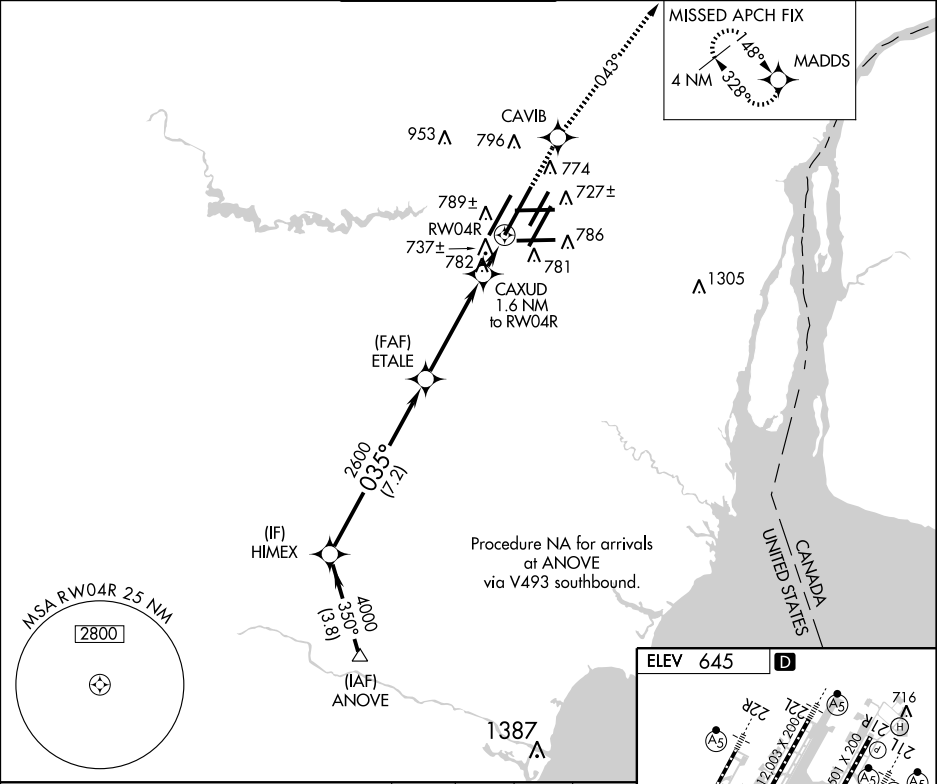
RNAV (GPS) RWY 4R

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

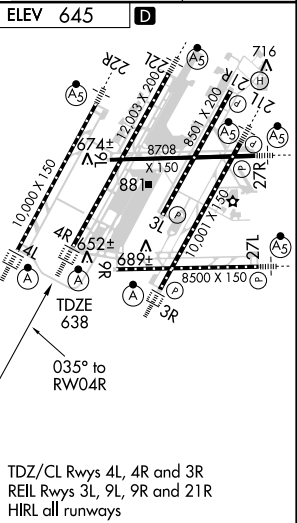
For inoperative ALSF-2, increase LPV all Cats visibility to RVR 5000, increase LNAV Cat D visibility to RVR 6000. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.6°C (4°F) or above -47°C (116°F). DME/DME RNP-0.3 NA.

ALSF-2 MISSED APPROACH: Climb to 3000 direct CAVIB and via 043° track to MADDS and hold.

ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST)	GND CON 121.8 (NW) 132.72 (SW)	119.45 (NE) 119.25 (SE)	CLNC DEL 120.65
------------------------	---	---	--	--	---------------------------



CATEGORY	A	B	C	D
LPV DA		964/24	326 (400-½)	
LNAV/VNAV DA		1015/40	377 (400-¾)	
LNAV MDA	1060/24	422 (500-½)	1060/40 422 (500-¾)	1060/50 422 (500-1)
CIRCLING	1200-1	555 (600-1)	1200-1½ 555 (600-1½)	1200-2 555 (600-2)



WAAS CH 81820 W21A	APP CRS 215°	Rwy Idg TDZE 632 Apt Elev 645	10001
--	------------------------	---	--------------

RNAV (GPS) RWY 21L

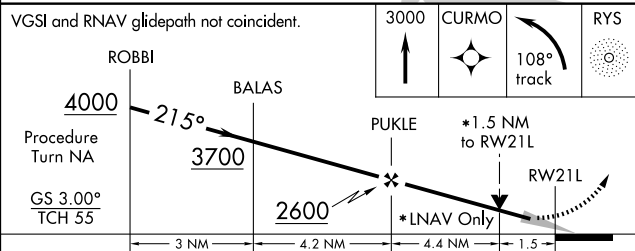
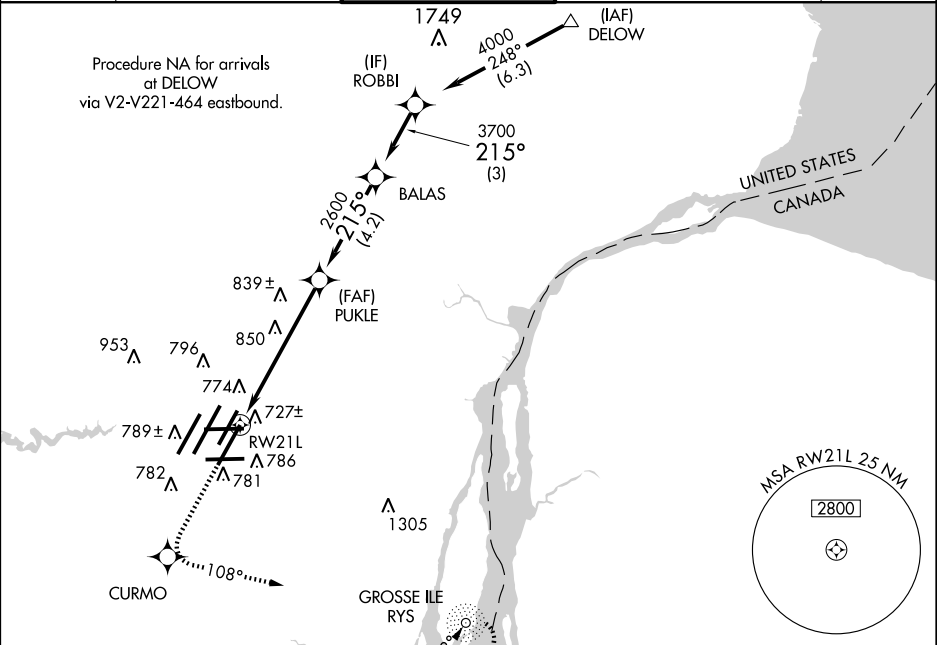
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

▼ For inoperative MALSR increase LPV all Cats visibility to RVR 5000.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA
below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.

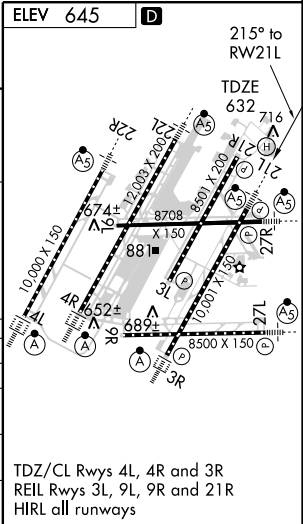


MISSED APPROACH: Climb to 3000 direct CURMO and left turn via 108° track to RYS NDB and hold.

ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST)	GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	CLNC DEL 120.65
------------------------	---	---	--	---------------------------




CATEGORY	A	B	C	D
LPV DA		922/24	290 (300-½)	
LNAV/VNAV DA		1118/60	486 (500-1¼)	
LNAV MDA	1180/24 548 (600-½)	1180/50 548 (600-1)	1180/60 548 (600-1¼)	
CIRCLING	1200-1 555 (600-1)	1200-1½ 555 (600-1½)	1200-2 555 (600-2)	



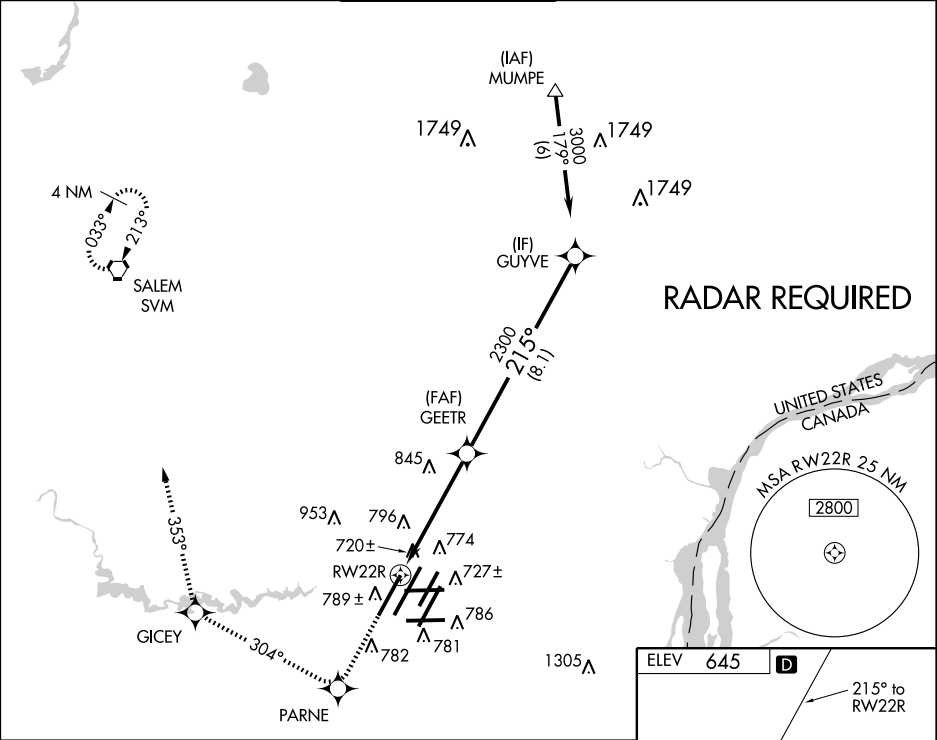
WAAS CH 82001 W22B	APP CRS 215°	Rwy Idg TDZE 10000 642 Apt Elev 645
--	------------------------	---

RNAV (GPS) RWY 22R

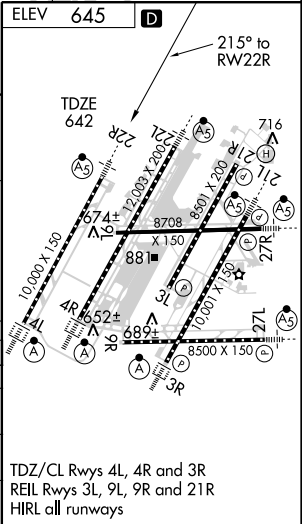
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

▼ For inoperative MALS/R, increase LPV all Cnts visibility to RVR 5000. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.	MALS/R 	MISSED APPROACH: Climb to 3000 direct PARNE and via 304° track to GICEY and via 353° track to SVM VORTAC and hold.
---	---	--

ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST)	GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	CLNC DEL 120.65
------------------------	---	---	--	---------------------------



	GUYVE	3000	PARNE	304° track	GICEY	353° track	SVM
	3000						
	GS 3.00° TCH 55	2300					
	8.1 NM	3.5 NM	1.5 NM				
CATEGORY	A	B	C	D			
LPV DA		892/24	250 (300-½)				
LNAV/VNAV DA		1006/40	364 (400-¾)				
LNAV MDA	1160/24	518 (600-½)	1160/50 518 (600-1)	1160/60 518 (600-1¼)			
CIRCLING	1200-1	555 (600-1)	1200-1½ 555 (600-1½)	1200-2 555 (600-2)			



WAAS CH 53300 W27B	APP CRS 275°	Rwy Idg 8500 TDZE 630 Apt Elev 645
--	------------------------	---

RNAV (GPS) RWY 27L

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

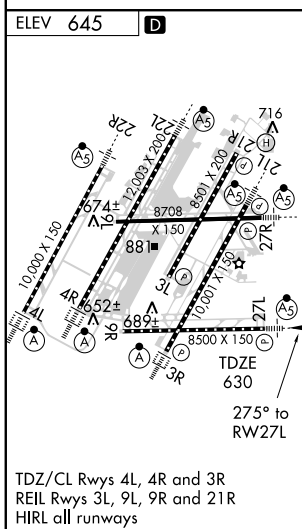
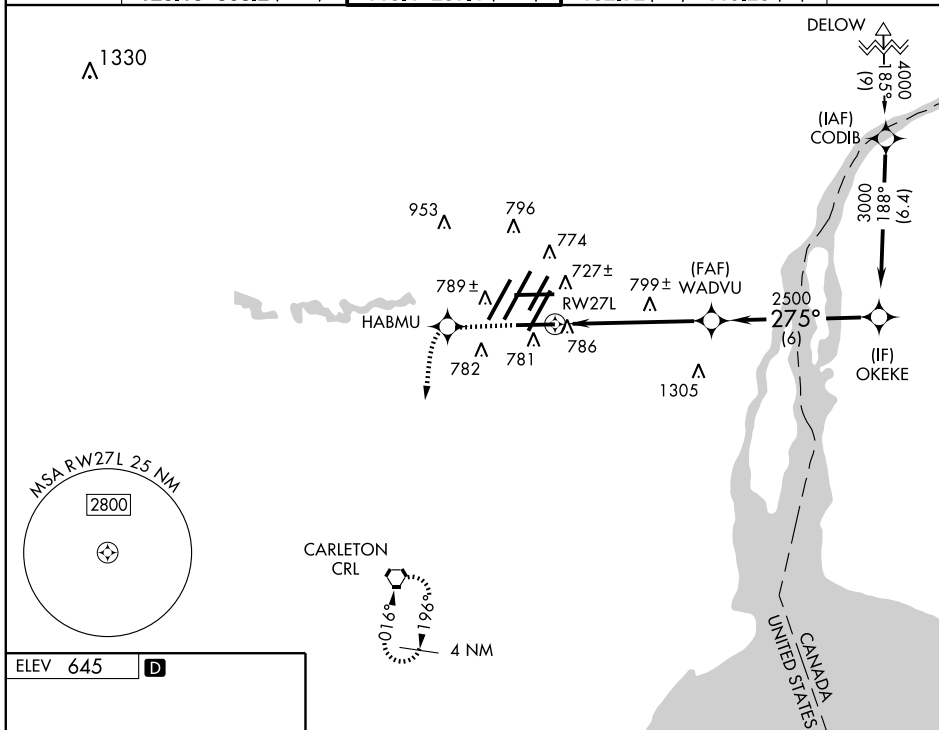


For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (117°F). DME/DME RNP-0.3 NA.
For inoperative MALSR increase LPV visibility to RVR 5000 all Cats.



MISSED APPROACH: Climb to 3000 direct HABMU and via 198° track to CRL VORTAC and hold.

ATIS 133.675	DETROIT APP CON 124.05 363.2 (WEST) 125.15 363.2 (EAST)	METRO TOWER 135.0 287.1 (WEST) 118.4 287.1 (EAST)	GND CON 121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	CLNC DEL 120.65
------------------------	---	---	--	---------------------------



3000 ↑	HABMU ✧	CRL ◡				
CATEGORY	A	B	C	D		
LPV DA	930/24		299 (300-½)			
LNAB/VNAV DA	1040/50		410 (400-1)			
LNAB MDA	1060/24	430 (500-½)	1060/40 430 (500-¾)	1060/50 430 (500-1)		
CIRCLING	1200-1½ 555 (600-1½)			1200-2 555 (600-2)		

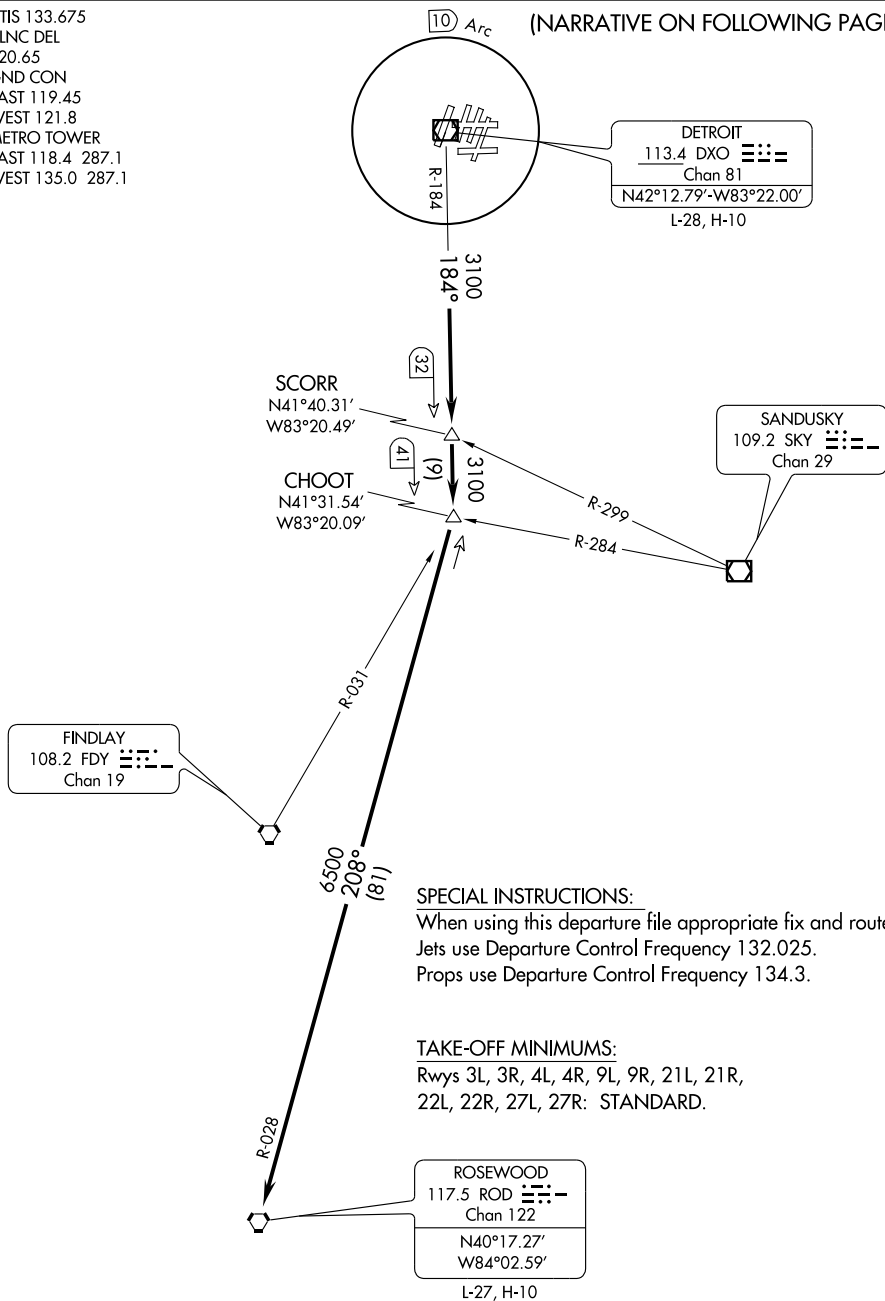
ROSEWOOD TWO DEPARTURE

SL-119 (FAA)

DETROIT, MICHIGAN

ATIS 133.675
CLNC DEL
120.65
GND CON
EAST 119.45
WEST 121.8
METRO TOWER
EAST 118.4 287.1
WEST 135.0 287.1

(NARRATIVE ON FOLLOWING PAGE)



NOTE: Chart not to scale.

NOTE: RADAR Required.



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to intercept DXO VOR/DME R-184 to CHOOT INT/DXO 41 DME (MEA 3100), then right turn to via ROD R-028 to ROD VORTAC (MEA 6500).

Jets maintain 10,000 feet, cross DXO VOR/DME 10 DME at or above 5,000 feet for noise abatement. If unable to comply, advise ATC prior to departure. Props maintain 4,000 feet or lower assigned altitude. Expect clearance to filed altitude/flight level 10 minutes after departure.

TAKE-OFF OBSTACLES

Rwy 3R: Headwall 399' from DER, 566' right of centerline, 17' AGL/647' MSL.

Rwy 4L: Multiple transmission towers 1516' from DER, 827' left of centerline, up to 60' AGL/690' MSL.

Multiple antennas 2751' from DER, 762' right of centerline, up to 84' AGL/714' MSL.

Rwy 4R: Antenna on building 3348' from DER, 1301' left of centerline, 100' AGL/736' MSL.

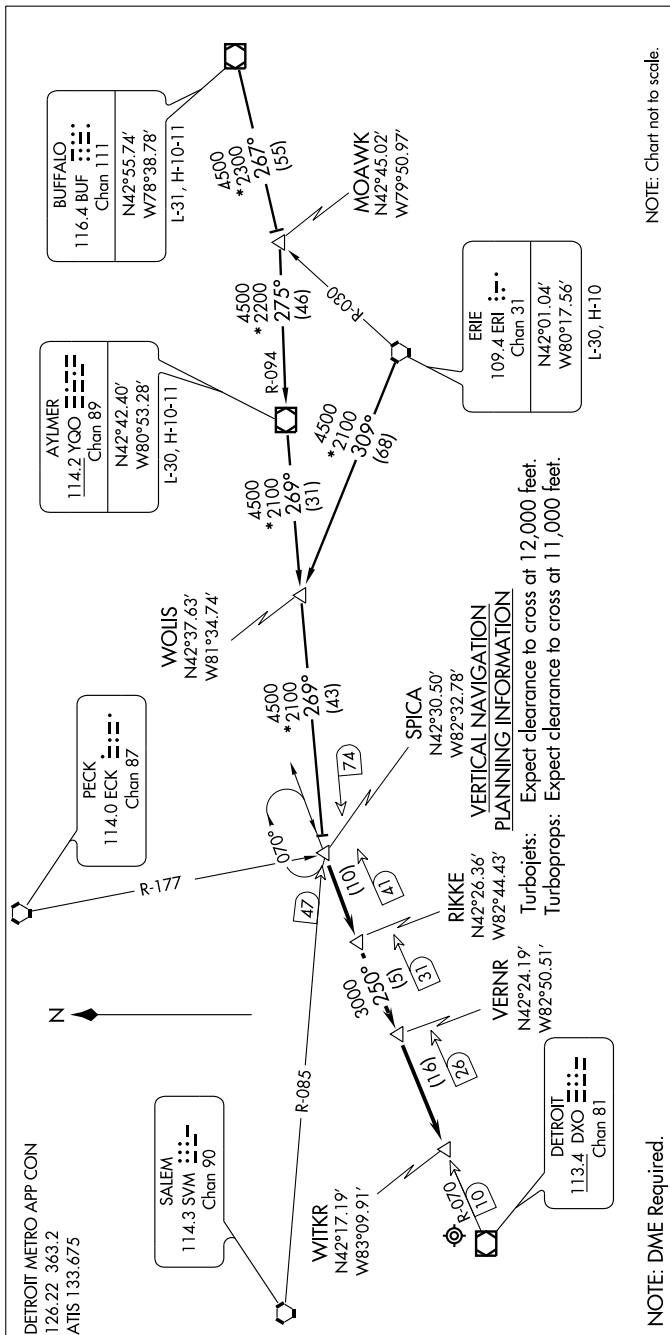
Rwy 9L: Multiple trees 968' to 2519' from DER, 462' left of centerline and 1173' right of centerline, up to 85' AGL/715' MSL.

Rwy 9R: Tree 1837' from DER, 947' right of centerline, 50' AGL/686' MSL.

Rwy 21L: Multiple trees 1079' to 3910' from DER, 586' left of centerline and 1188' right of centerline, up to 100' AGL/733' MSL.

Rwy 22L: Multiple trees 794' to 3694' from DER, 611' right of centerline and 1381' left of centerline, up to 110' AGL/740' MSL.

Rwy 27R: Rod on ASR 4461' from DER, 464' left of centerline, 106' AGL/756' MSL.

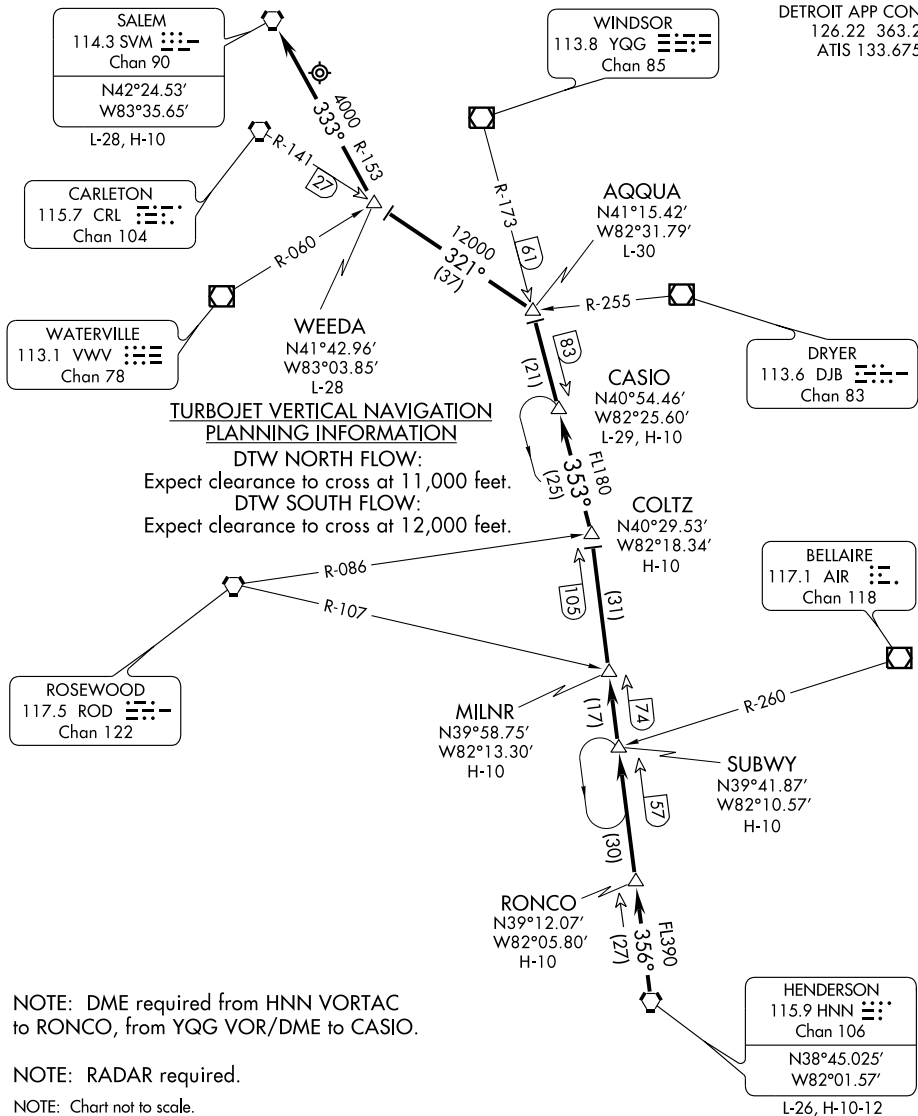


AYIMER TRANSITION [YQO.SPICA2]: From over YQO VOR/DME via YQO R-269 to SPICA 74 DME FIX. Thence . . .
 over BUFFALO TRANSITION [BUF.SPICA2]: From over BUF VOR/DME via BUF R-267 to MOAWK INT, then via YQO
 R-094 to YQO VOR/DME, then via YQO R-269 to SPICA 74 DME FIX. Thence . . .
 ERERIE TRANSITION [ERI.SPICA2]: From over ERI VORTAC via ERI R-309 to WOLIS INT, then via YQO R-269 to
 SPICA 74 DME FIX. Thence. . .

WEEDA ONE ARRIVAL

ST-119 (FAA)

DETROIT, MICHIGAN

 DETROIT APP CON
 126.22 363.2
 ATIS 133.675


ARRIVAL ROUTE DESCRIPTION

From over HNN VORTAC via R-356 to COLTZ INT (MEA FL390), then via YQG R-173 to AQUA INT (MEA FL180), then via CRL R-141 TO WEEDA INT (MEA 12000) then via SVM R-153 TO SVM VORTAC (MEA 4000). Expect radar vectors to final approach course.

D

FIELD
ELEV
716

ELEV
702

ELEV
700

- 42°15.0'N

E-1
HOLD

GENERAL
AVIATION
PARKING

TERMINAL

815

WEST

ELEV -

ELEV -

HANGARS ·

AIR FREIGHT DISTRIBUTION CENTER

CONTROL TOWER

— 42°14.0'N

E2 /

ELEV
703

RWY 5R-23L, 9L-27R
S55, D70, ST89, DT120
RWY 5L-23R, 9R-27L, 14-32
S35, D45, DT90

**CAUTION: BE ALERT TO
RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY
HOLDING INSTRUCTIONS IS REQUIRED.**

- 42°13'0"N.

83°32.5'W

83°32.0'W

83°31.5'W

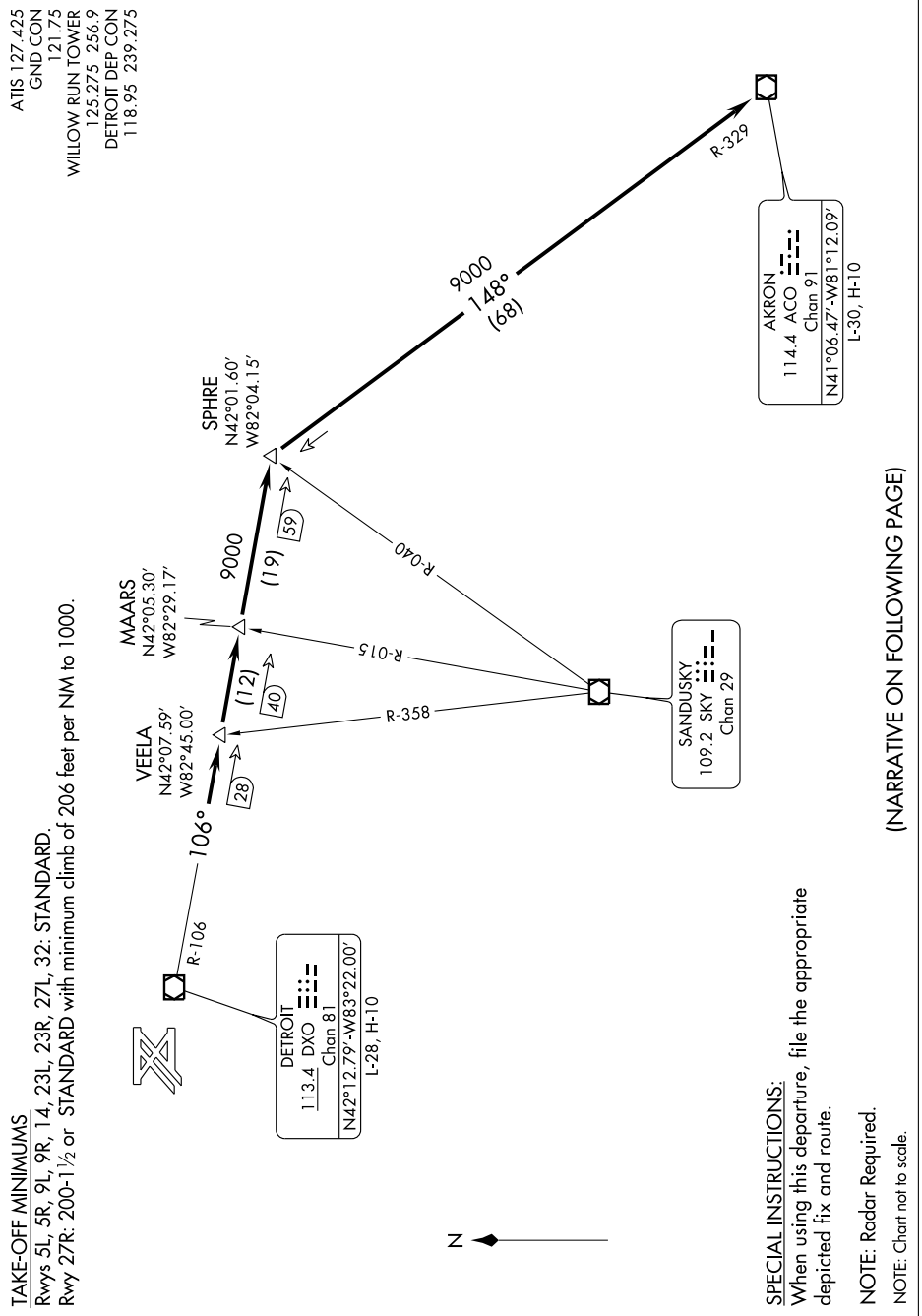
83°31.0'W

EC-1. 17 DEC 2009 to 14 JAN 2010

AKRON TWO DEPARTURE

SL-467 (FAA)

DETROIT / WILLOW RUN (YIP)
DETROIT, MICHIGAN





DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors, thence. . . .

. . . .to intercept DXO VOR/DME R-106 to SPHRE INT, then via ACO R-329 to ACO VOR/DME. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES

Rwy 5L: Multiple Trees beginning 1438' to 2887' from DER, from 119' to 438' left of centerline, up to 79' AGL/785' MSL.

Rwy 5R: Multiple Trees beginning 1877' to 2472' from DER, from 134' to 922' left and right of centerline, up to 78' AGL/777' MSL.

Rwy 9R: Multiple Trees beginning 827' to 2598' from DER, from 432' to 600' left and right of centerline, up to 77' AGL/780' MSL.

Rwy 23L: Tree 1304' from DER, 438' right of centerline, 42' AGL/757' MSL.
Tree 2457' from DER, 720' left of centerline, 66' AGL/781' MSL.

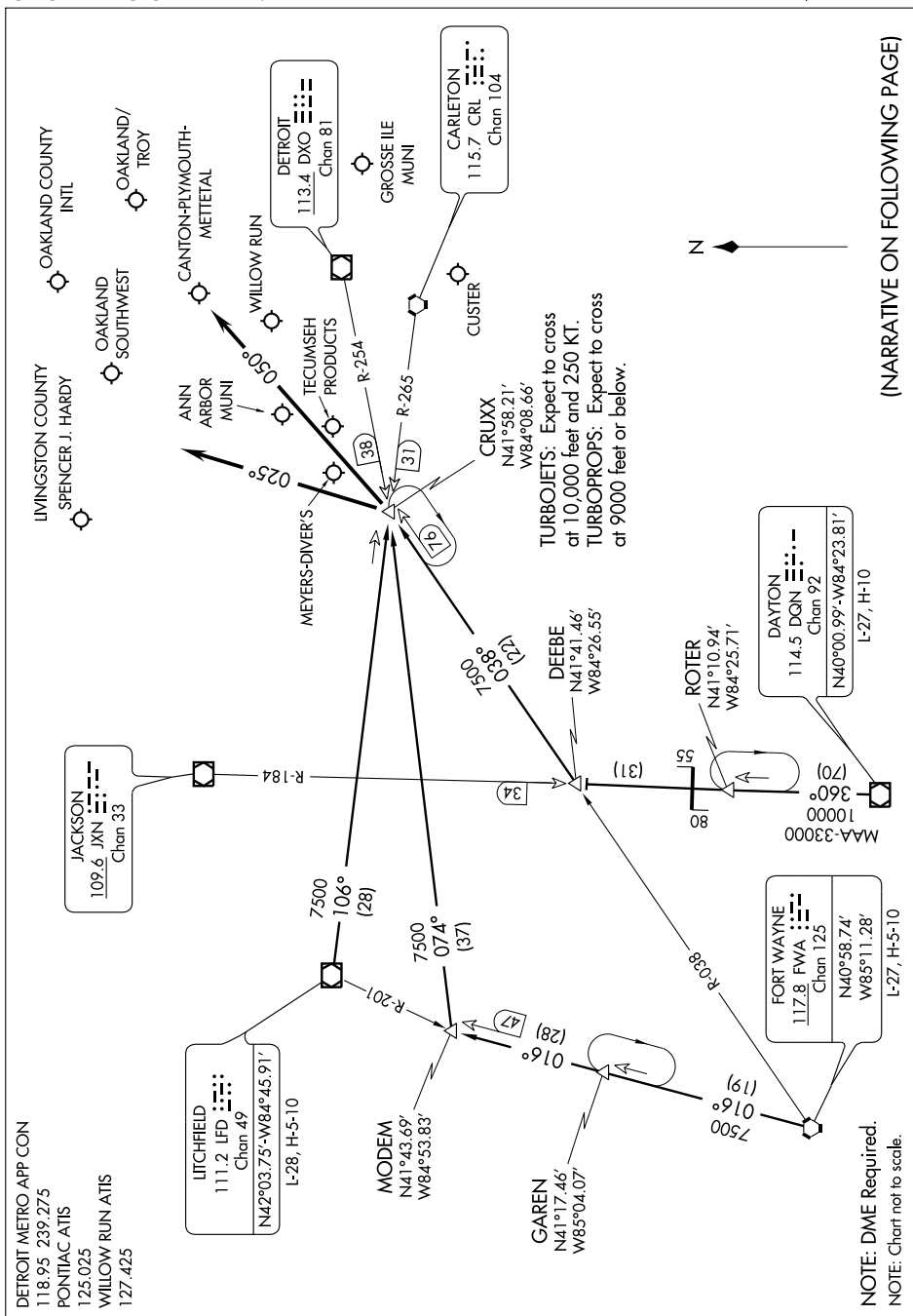
Rwy 23R: Multiple trees and road with vehicle beginning 587' to 1333' from DER, from 282' to 814' left and right of centerline, up to 77' AGL/793' MSL.

Rwy 27L: Multiple Trees and Pole beginning 1273' to 2024' from DER, from 47' to 769' left and right of centerline, up to 90' AGL/805' MSL.

Rwy 27R: Railroad and Lights beginning 564' to 1565' from DER, from 4' to 333' left of centerline, up to 54' AGL/770' MSL.
Tree and Lights beginning 102' to 1257' from DER, from 10' to 485' right of centerline, up to 55' AGL/771' MSL.
Tower 7161' from DER, 502' left of centerline, 162' AGL/900' MSL.

Rwy 32: Multiple Trees and Poles beginning 701' to 1884' from DER, from 78' to 750' left of centerline, up to 84' AGL/798' MSL.
Multiple Trees 1157' to 1893' from DER, from 126' to 475' right of centerline, up to 66' AGL/780' MSL.

CRUXX FOUR ARRIVAL



EC-1. 17 DEC 2009 to 14 JAN 2010

ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUXX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUXX INT. Thence

FORT WAYNE TRANSITION (FWA.CRUXX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUXX INT. Thence

LITCHFIELD TRANSITION (LFD.CRUXX4): From over LFD VORTAC via LFD R-106 to CRUXX INT. Thence

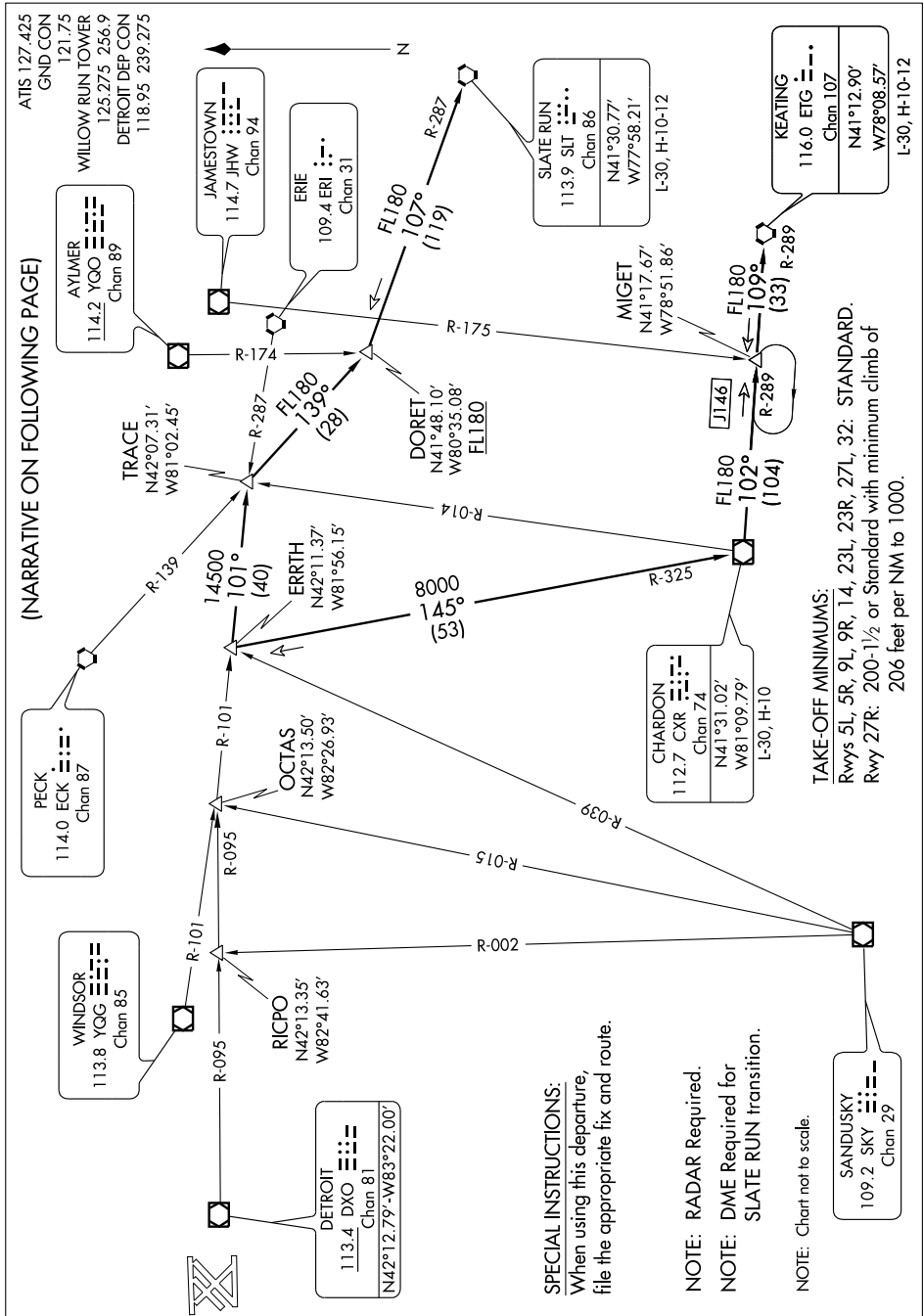
. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUXX INT via 025° heading.

. . . . Aircraft landing YIP or ARB: From over CRUXX INT via 050° heading.
Expect radar vector to final approach course.

ERRTH TWO DEPARTURE

SL-467 (FAA)

DETROIT, MICHIGAN





DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

CHARDON TRANSITION (ERRTH2.CXR): From over ERRTH INT via CXR R-325 to CXR VOR/DME.

KEATING TRANSITION (ERRTH2.ETG): From over ERRTH INT via CXR R-325 to CXR VOR/DME, then via CXR R-102 and ETG R-289 to MIGET INT, then via ETG R-289 to ETG VORTAC.

SLATE RUN TRANSITION (ERRTH2.SLT): (DME Required) From over ERRTH INT via YQG R-101 to TRACE INT, then via ECK R-139 to DORET INT, then via SLT R-287 to SLT VORTAC.

TAKE-OFF OBSTACLES:

- Rwy 5L: Multiple trees beginning 1438' to 2887' from DER, from 119' to 438' left of centerline, up to 79' AGL/785' MSL.
- Rwy 5R: Multiple trees beginning 1877' to 2472' from DER, from 134' to 922' left and right of centerline, up to 78' AGL/777' MSL.
- Rwy 9R: Multiple trees beginning 827' to 2598' from DER, from 432' to 600' left and right of centerline, up to 77' AGL/780' MSL.
- Rwy 23L: Tree 1304' from DER, 438' right of centerline, 42' AGL/757' MSL.
Tree 2457' from DER, 720' left of centerline, 66' AGL/781' MSL.
- Rwy 23R: Multiple trees and road with vehicle beginning 587' to 1333' from DER, from 282' to 814' left and right of centerline, up to 77' AGL/793' MSL.
- Rwy 27L: Multiple trees and pole beginning 1273' to 2024' from DER, from 47' to 769' left and right of centerline, up to 90' AGL/805' MSL.
- Rwy 27R: Railroad and lights beginning 564' to 1565' from DER, from 4' to 333' left of centerline, up to 54' AGL/770' MSL. Tree and lights beginning 102' to 1257' from DER, from 10' to 485' right of centerline, up to 55' AGL/771' MSL. Tower 7161' from DER, 502' left of centerline, 162' AGL/900' MSL.
- Rwy 32: Multiple trees and poles beginning 701' to 1884' from DER, from 78' to 750' left of centerline, up to 84' AGL/798' MSL. Multiple trees 1157' to 1893' from DER, from 126' to 475' right of centerline, up to 66' AGL/780' MSL.

ATIS 127.425
GND CON
121.75
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 239.275

SPECIAL INSTRUCTIONS:

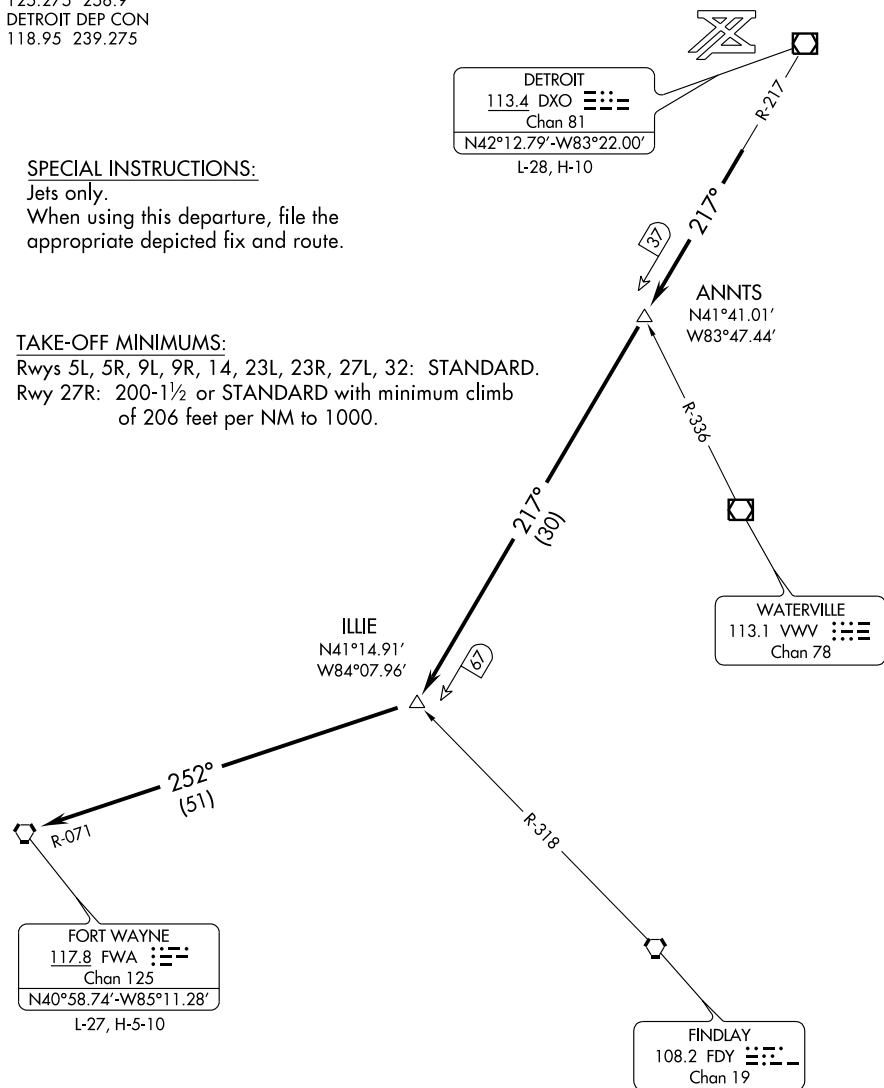
Jets only.

When using this departure, file the appropriate depicted fix and route.

TAKE-OFF MINIMUMS:

Rwys 5L, 5R, 9L, 9R, 14, 23L, 23R, 27L, 32: STANDARD.

Rwy 27R: 200-1½ or STANDARD with minimum climb of 206 feet per NM to 1000.



NOTE: RADAR Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors, thence. . . .

. . . .to intercept DXO VOR/DME R-217 to ILLIE INT, then via FWA R-071 to FWA VORTAC. Maintain 3000, expect clearance to filed flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

- Rwy 5L: Multiple trees beginning 1438' to 2887' from DER, from 119' to 438' left of centerline, up to 79' AGL/785' MSL.
- Rwy 5R: Multiple trees beginning 1877' to 2472' from DER, from 134' to 922' left and right of centerline, up to 78' AGL/777' MSL.
- Rwy 9R: Multiple trees beginning 827' to 2598' from DER, from 432' to 600' left and right of centerline, up to 77' AGL/780' MSL.
- Rwy 23L: Tree 1304' from DER, 438' right of centerline, 42' AGL/757' MSL.
Tree 2457' from DER, 720' left of centerline, 66' AGL/781' MSL.
- Rwy 23R: Multiple trees and road beginning 587' to 1333' from DER, from 282' to 814' left and right of centerline, up to 77' AGL/793' MSL.
- Rwy 27L: Multiple trees and pole beginning 1273' to 2024' from DER, from 47' to 769' left and right of centerline, up to 90' AGL/805' MSL.
- Rwy 27R: Railroad and lights beginning 564' to 1565' from DER, from 4' to 333' left of centerline, up to 54' AGL/770' MSL.
Tree and lights beginning 102' to 1257' from DER, from 10' to 485' right of centerline, up to 55' AGL/771' MSL.
Tower 7161' from DER, 502' left of centerline, 162' AGL/900' MSL.
- Rwy 32: Multiple trees and poles beginning 701' to 1884' from DER, from 78' to 750' left of centerline, up to 84' AGL/798' MSL.
Multiple trees 1157' to 1893' from DER, from 126' to 475' right of centerline, up to 66' AGL/780' MSL.

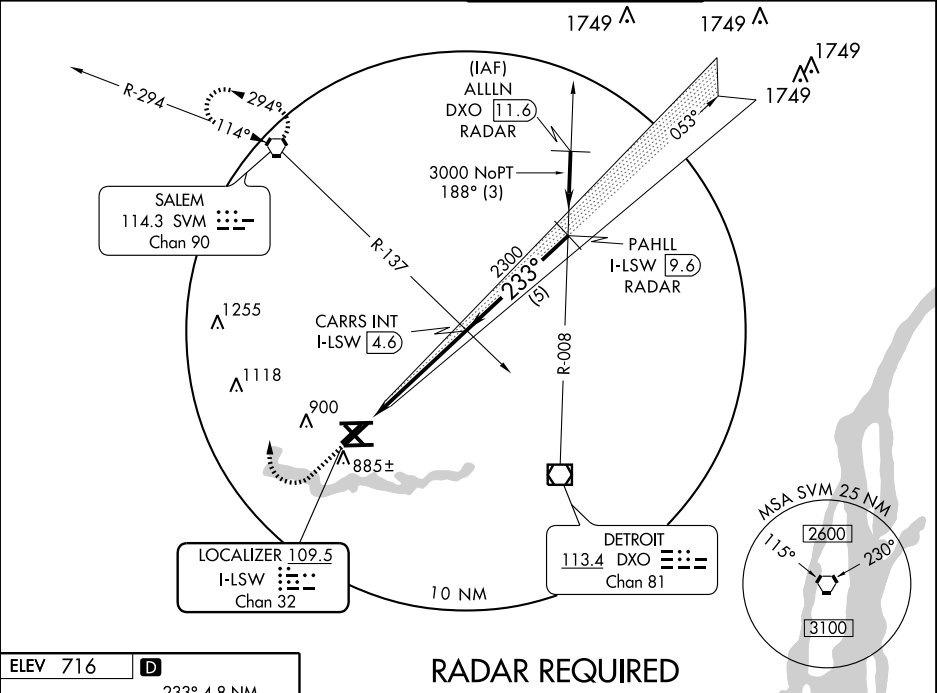
EC-1. 17 DEC 2009 to 14 JAN 2010



LOC/DME I-LSW	APP CRS	Rwy Idg	7526
109.5	233°	TDZE	708
Chan 32		Apt Elev	716

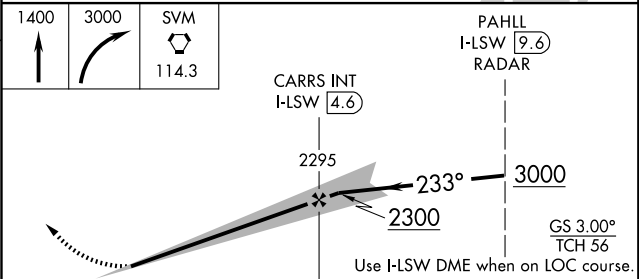
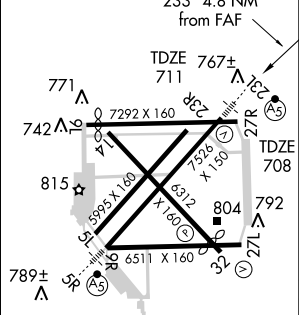
ILS RWY 23L
DETROIT/WILLOW RUN (YIP)

ATIS 127.425		DETROIT APP CON 118.95 363.2		WILLOW RUN TOWER 125.275 256.9		GND CON 121.75	
-----------------	--	---------------------------------	--	-----------------------------------	--	-------------------	--



ELEV 716	D
----------	---

RADAR REQUIRED



FAF to MAP 4.8 NM					
Knots	60	90	120	150	180
Min:Sec	4:48	3:12	2:24	1:55	1:36

CATEGORY	A	B	C	D
S-ILS 23L	908-1/2 200 (200-1/2)			
S-LOC 23L	1140-1/2 432 (500-1/2)	1140-3/4 432 (500-3/4)	1140-1 432 (500-1)	1140-1 432 (500-1)
SIDESTEP RWY 23R	1140-1 429 (500-1)	1140-1 1/2 429 (500-1 1/2)	1140-2 429 (500-2)	1140-2 429 (500-2)
CIRCLING	1200-1 484 (500-1)	1200-1 1/2 484 (500-1 1/2)	1280-2 564 (600-2)	1280-2 564 (600-2)



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

DUNKIRK TRANSITION (MOONN2.DKK): From over MOONN INT via SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to BEWEL INT, then via DKK R-267 to DKK VORTAC.

JAMESTOWN TRANSITION (MOONN2.JHW): From over MOONN INT via SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to BEWEL INT, then via JHW R-282 to JHW VOR/DME.

LONDON TRANSITION (MOONN2.YXU): From over MOONN INT via SVM R-095 to BROKK INT, then via YXU R-212 to YXU VORTAC.

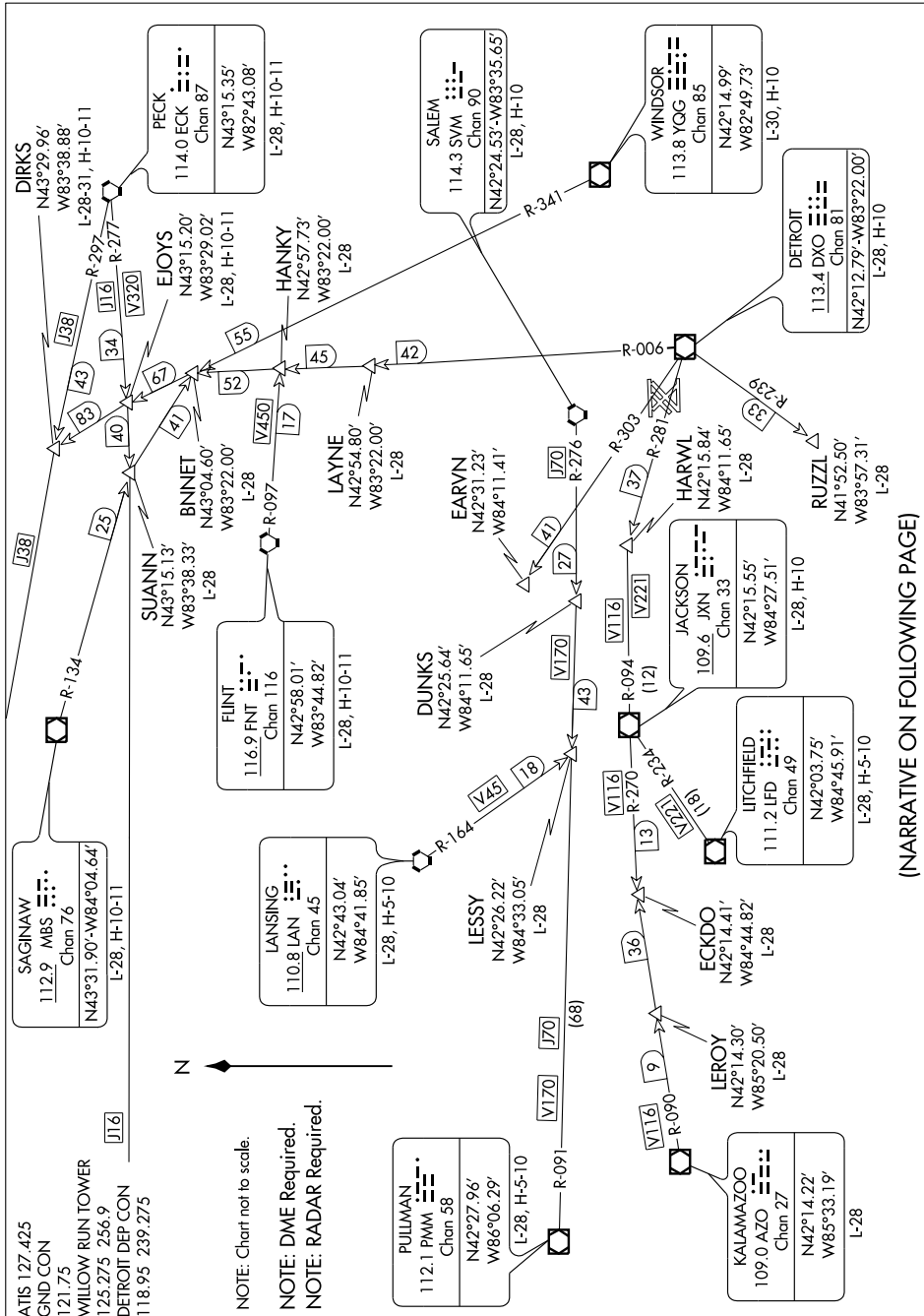
TAKE-OFF OBSTACLES

- Rwy 5L: Multiple trees beginning 1438' to 2887' from DER, from 119' to 438' left of centerline, up to 79' AGL/785' MSL.
- Rwy 5R: Multiple trees beginning 1877' to 2472' from DER, from 134' to 922' left and right of centerline, up to 78' AGL/777' MSL.
- Rwy 9R: Multiple trees beginning 827' to 2598' from DER, from 432' to 600' left and right of centerline, up to 77' AGL/780' MSL.
- Rwy 23L: Tree 1304' from DER, 438' right of centerline, 42' AGL/757' MSL.
Tree 2457' from DER, 720' left of centerline, 66' AGL/781' MSL.
- Rwy 23R: Multiple trees and road beginning 587' to 1333' from DER, from 282' to 814' left and right of centerline, up to 77' AGL/793' MSL.
- Rwy 27L: Multiple trees and pole beginning 1273' to 2024' from DER, from 47' to 769' left and right of centerline, up to 90' AGL/805' MSL.
- Rwy 27R: Railroad and lights beginning 564' to 1565' from DER, from 4' to 333' left of centerline, up to 54' AGL/770' MSL.
Tree and lights beginning 102' to 1257' from DER, from 10' to 485' right of centerline, up to 55' AGL/771' MSL.
Tower 7161' from DER, 502' left of centerline, 162' AGL/900' MSL.
- Rwy 32: Multiple trees and poles beginning 701' to 1884' from DER, from 78' to 750' left of centerline, up to 84' AGL/798' MSL.
Multiple trees 1157' to 1893' from DER, from 126' to 475' right of centerline, up to 66' AGL/780' MSL.

PALACE THREE DEPARTURE

SL-467 (FAA)

DETROIT, MICHIGAN



(NARRATIVE ON FOLLOWING PAGE)

EC-1, 17 DEC 2009 to 14 JAN 2010

PALACE THREE DEPARTURE

SL-467 (FAA)

DETROIT, MICHIGAN



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF MINIMUMS:

Rwy 5L, 5R, 9L, 9R, 14, 23L, 23R, 27L, 32: STANDARD.

Rwy 27R: 200-1½ or STANDARD with minimum climb of 206 feet per NM to 1000.

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

SPECIAL INSTRUCTIONS:

When using this departure, file the appropriate depicted departure fix and route. Aircraft landing/overflying Lansing (LAN) or overflying Flint (FNT) at 10,000 feet or below, file via EARNV. Aircraft landing Flint (FNT) at 10,000 feet or below, file via LAYNE. Aircraft landing/overflying Toledo (TOL) at 10,000 feet or below, file via RUZZL. Aircraft over HARWL must file FL220 and below.

TAKE-OFF OBSTACLES:

- Rwy 5L: Multiple trees beginning 1438' to 2887' from DER, from 119' to 438' left of centerline, up to 79' AGL/785' MSL.
- Rwy 5R: Multiple trees beginning 1877' to 2472' from DER, from 134' to 922' left and right of centerline, up to 78' AGL/777' MSL.
- Rwy 9R: Multiple trees beginning 827' to 2598' from DER, from 432' to 600' left and right of centerline, up to 77' AGL/780' MSL.
- Rwy 23L: Tree 1304' from DER, 438' right of centerline, 42' AGL/757' MSL.
Tree 2457' from DER, 720' left of centerline, 66' AGL/781' MSL.
- Rwy 23R: Multiple trees and road with vehicle beginning 587' to 1333' from DER, from 282' to 814' left and right of centerline, up to 77' AGL/793' MSL.
- Rwy 27L: Multiple trees and pole beginning 1273' to 2024' from DER, from 47' to 769' left and right of centerline, up to 90' AGL/805' MSL.
- Rwy 27R: Railroad and lights beginning 564' to 1565' from DER, from 4' to 333' left of centerline, up to 54' AGL/770' MSL. Tree and lights beginning 102' to 1257' from DER, from 10' to 485' right of centerline, up to 55' AGL/771' MSL. Tower 7161' from DER, 502' left of centerline, 162' AGL/900' MSL.
- Rwy 32: Multiple trees and poles beginning 701' to 1884' from DER, from 78' to 750' left of centerline, up to 84' AGL/798' MSL. Multiple trees 1157' to 1893' from DER, from 126' to 475' right of centerline, up to 66' AGL/780' MSL.

ATIS 127.425

GND CON

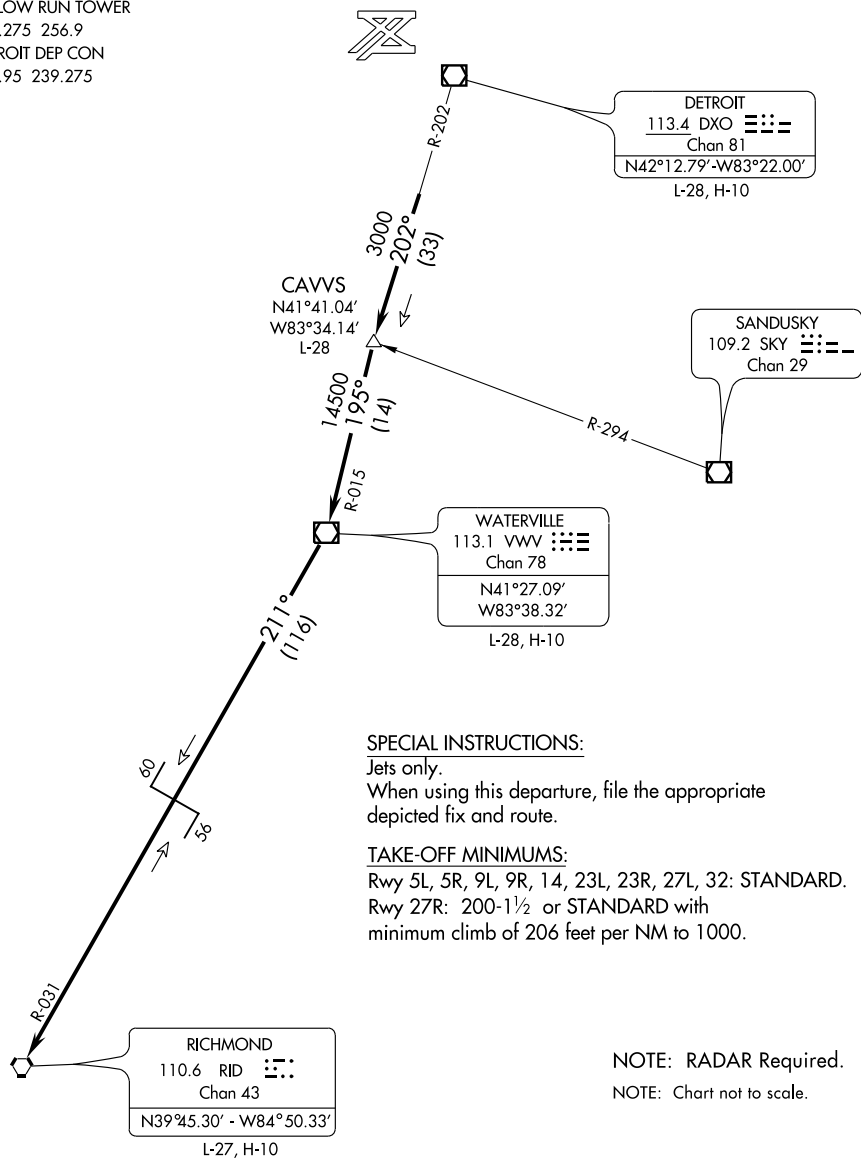
121.75

WILLOW RUN TOWER

125.275 256.9

DETROIT DEP CON

118.95 239.275



(NARRATIVE ON FOLLOWING PAGE)



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors, thence. . . .

. . . . To intercept DXO VOR/DME R-202 to CAVVS INT/DXO 33 DME, then via VWV R-015 to VWV VOR/DME. Then right turn via VWV R-211 and RID R-031 to RID VORTAC. Maintain 3,000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

- Rwy 5L: Multiple trees beginning 1438' to 2887' from DER, from 119' to 438' left of centerline, up to 79' AGL/785' MSL.
- Rwy 5R: Multiple trees beginning 1877' to 2472' from DER, from 134' to 922' left and right of centerline, up to 78' AGL/777' MSL.
- Rwy 9R: Multiple trees beginning 827' to 2598' from DER, from 432' to 600' left and right of centerline, up to 77' AGL/780' MSL.
- Rwy 23L: Tree 1304' from DER, 438' right of centerline, 42' AGL/757' MSL.
Tree 2457' from DER, 720' left of centerline, 66' AGL/781' MSL.
- Rwy 23R: Multiple trees and road beginning 587' to 1333' from DER, from 282' to 814' left and right of centerline, up to 77' AGL/793' MSL.
- Rwy 27L: Multiple trees and pole beginning 1273' to 2024' from DER, from 47' to 769' left and right of centerline, up to 90' AGL/805' MSL.
- Rwy 27R: Railroad and lights beginning 564' to 1565' from DER, from 4' to 333' left of centerline, up to 54' AGL/770' MSL.
Tree and lights beginning 102' to 1257' from DER, from 10' to 485' right of centerline, up to 55' AGL/771' MSL.
Tower 7161' from DER, 502' left of centerline, 162' AGL/900' MSL.
- Rwy 32: Multiple trees and poles beginning 701' to 1884' from DER, from 78' to 750' left of centerline, up to 84' AGL/798' MSL.
Multiple trees 1157' to 1893' from DER, from 126' to 475' right of centerline, up to 66' AGL/780' MSL.

APP CRS 053°	Rwy Idg TDZE Apt Elev	5995 716 716
------------------------	-----------------------------	---

RNAV (GPS) RWY 5L

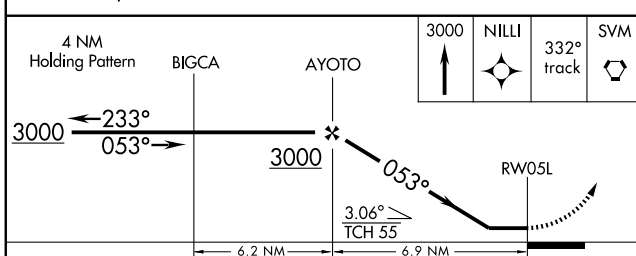
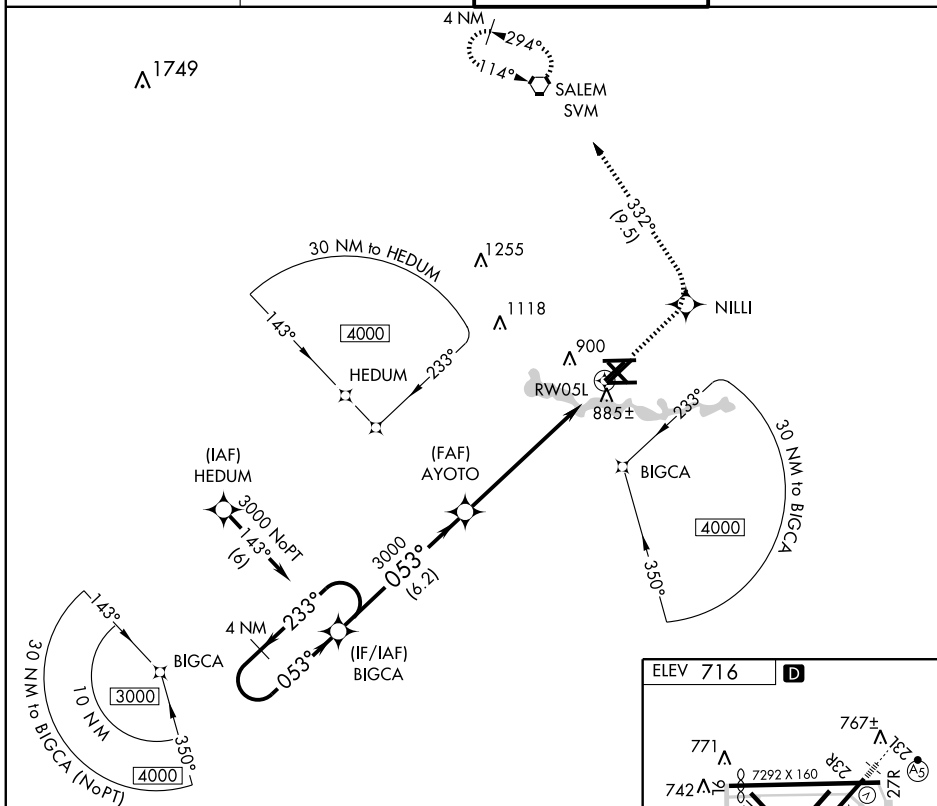
DETROIT/WILLOW RUN (YIP)

T Circling NA at night to RWY 09L, 14, 23R.
GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.

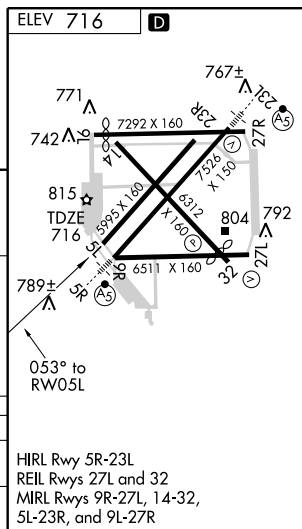
A NA Straight-in/Circling NA at night to Rwy 05L.

MISSED APPROACH: Climb to 3000 direct NILLI WP and via 332° track to SVM VORTAC and hold.

ATIS 127.425	DETROIT APP CON 118.95 363.2	WILLOW RUN TOWER 125.275 256.9	GND CON 121.75
-----------------	---------------------------------	-----------------------------------	-------------------




CATEGORY	A	B	C	D
INAV MDA	1240-1	524 (600-1)	1240-1½ 524 (600-1½)	1240-1¾ 524 (600-1¾)
CIRCLING	1240-1	524 (600-1)	1240-1½ 524 (600-1½)	1280-2 564 (600-2)



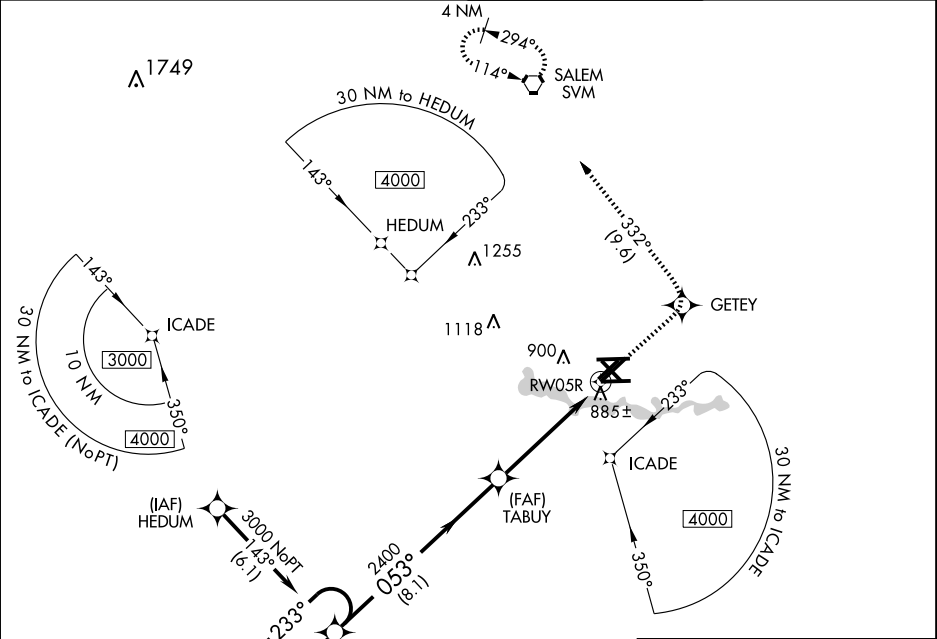
APP CRS	Rwy Idg	7526
053°	TDZE	715
	Apt Elev	716

RNAV (GPS) RWY 5R

DETROIT/WILLOW RUN (YIP)

<p>▼ Circling NA at night to Rwy 5L, 9L, 14, 23R. For inoperative MALSR increase LNAV Cat A/B visibilities to RVR 5000. GPS or RNP-0.3 required. DME/DME RNP-0.3 NA. Baro-VNAV NA below -16°C (4°F)</p>	<p>MALSR</p> <p></p>	<p>MISSED APPROACH: Climb to 3000 direct GETEY WP and via 332° track to SVM VORTAC and hold.</p>
--	--	---

ATIS 127.425	DETROIT APP CON 118.95 363.2	WILLOW RUN TOWER 125.275 256.9	GND CON 121.75
------------------------	--	--	--------------------------



<div> <div>4 NM Holding Pattern</div> <div>ICADE</div> <div> <div>3000</div> <div>←233°</div> <div>053°→</div> </div> <div>GS 3.00° TCH 57</div> </div>				<div> <div>3000</div> <div>↑</div> </div> <div>GETEY</div> <div>TRK 332°</div> <div>SVM</div>			
<div> <div>TABUY</div> <div>053°</div> <div>2400</div> <div>*1.3 NM to RW05R</div> <div>RW05R</div> <div>*LNAV only</div> </div>				<div> <div>8.1 NM</div> <div>3.7 NM</div> <div>1.3</div> </div>			
CATEGORY	A	B	C	D			
GLS DA	NA						
LNAV/ VNAV DA	1200/60 485 (500-1¼)						
LNAV MDA	1200/40 485 (500-¾)			1200/50 485 (500-1)			
CIRCLING	1200-1¾ 484 (500-1¾)			1280-2 564 (600-2)			

ELEV 716

D

HRL Rwy 5R-23L

REIL Rwys 27L and 32

MRL Rwys 9R-27L, 14-32, 5L-23R, and 9L-27R

APP CRS	Rwy Idg	6718
094°	TDZE	715
	Apt Elev	716

RNAV (GPS) RWY 9L

DETROIT/WILLOW RUN (YIP)

DETROIT/WILLOW RUN (YIP)

T DME/DME RNP-0.3 NA.
Procedure NA at night.
Visibility reduction by helicopters NA.

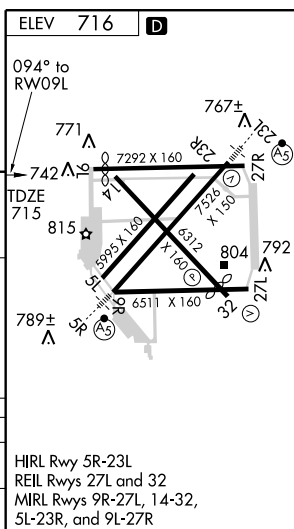
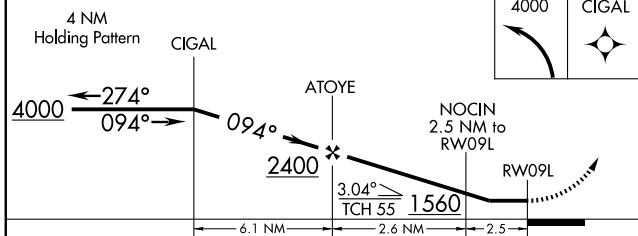
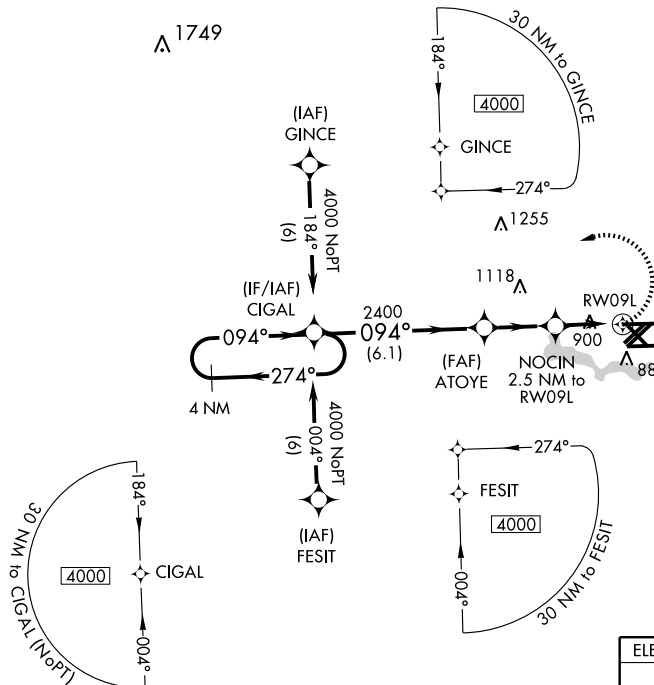
MISSED APPROACH: Climbing left turn to 4000 direct CIGAL and hold.

ATIS
127.425

DETROIT APP CON
118.95 363.2

WILLOW RUN TOWER
125.275 256.9

GND CON
121.75



APP CRS 094°	Rwy Idg TDZE Apt Elev	6511 715 716
------------------------	-----------------------------	---

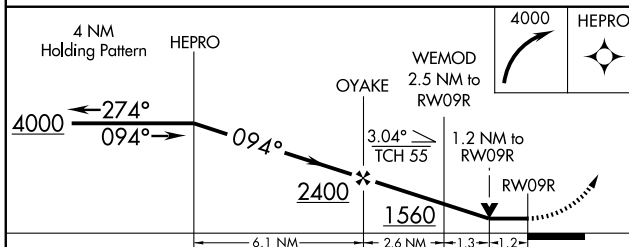
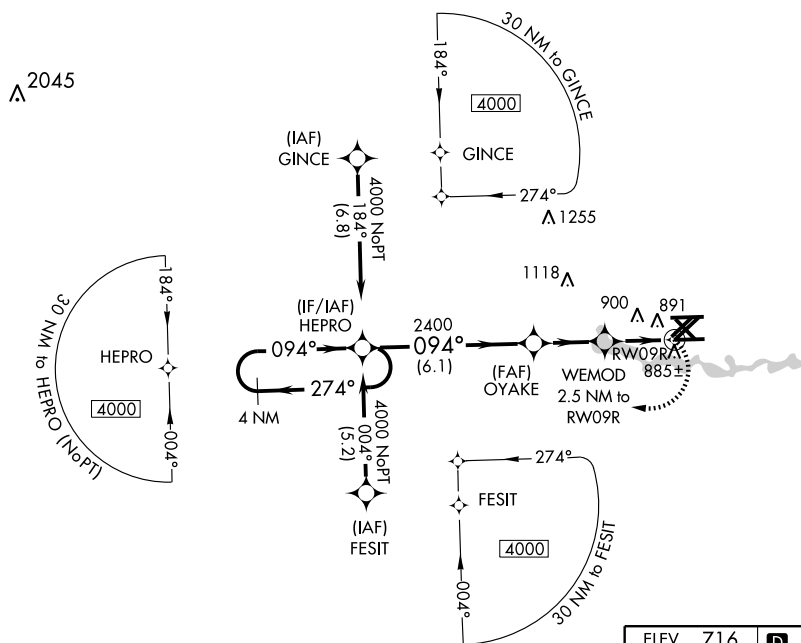
RNAV (GPS) RWY 9R

DETROIT/WILLOW RUN (YIP)

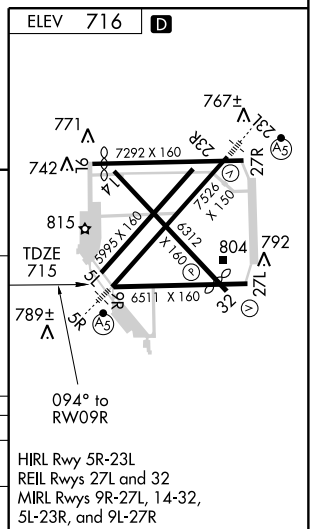
T Circling to Rwy 5L, 9L, 14, 23R NA at night.
DME/DME RNP-0.3 NA.
Visibility reduction by helicopters NA.

MISSED APPROACH: Climbing right turn to 4000 direct HEPRO and hold.

ATIS 127.425	DETROIT APP CON 118.95 363.2	WILLOW RUN TOWER 125.275 256.9	GND CON 121.75
-----------------	---------------------------------	-----------------------------------	-------------------



CATEGORY	A	B	C	D
INAV MDA	1160-1	445 (500-1)	1160-1¼ 445 (500-1¼)	1160-1½ 445 (500-1½)
CIRCLING	1200-1	484 (500-1)	1200-1½ 484 (500-1½)	1280-2 564 (600-2)



APP CRS	Rwy Idg	6312
142°	TDZE	714
	Apt Elev	716

RNAV (GPS) RWY 14

DETROIT/WILLOW RUN (YIP)

▽ DME/DME RNP-0.3 NA.
Procedure NA at night.
Visibility reduction by helicopters NA.

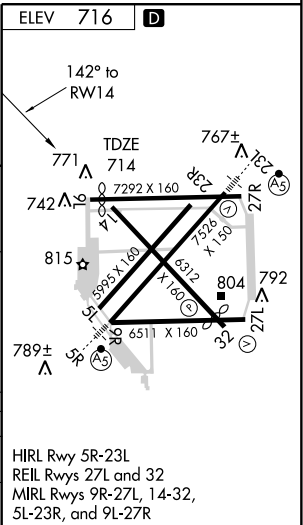
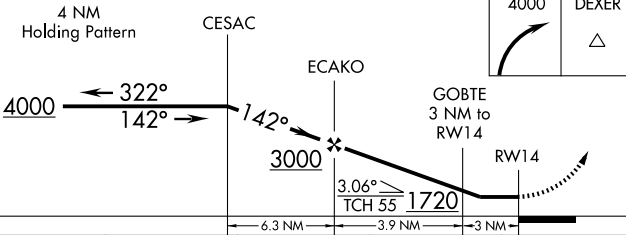
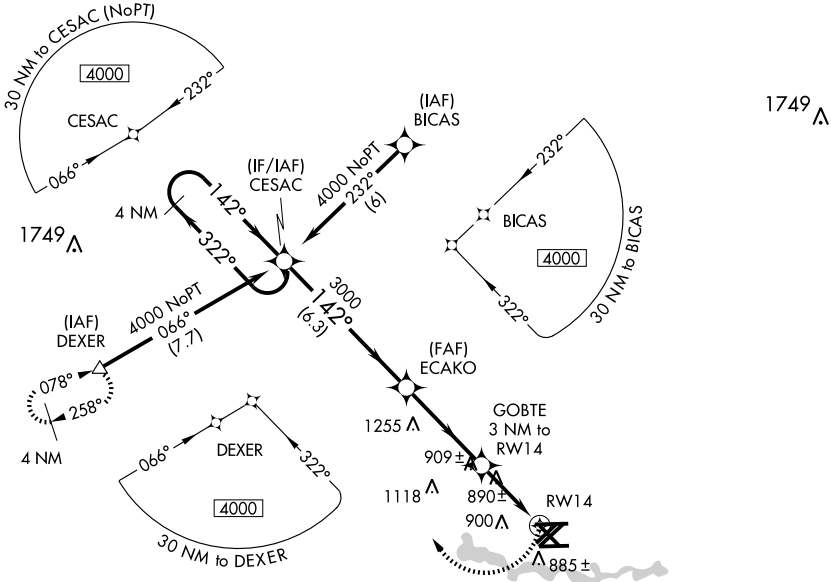
MISSED APPROACH: Climbing right turn to 4000 direct DEXER and hold.

ATIS
127.425

DETROIT APP CON
118.95 363.2

WILLOW RUN TOWER
125.275 256.9


GND CON
121.75



WAAS CH 81910 W23A	APP CRS 233°	Rwy Idg TDZE Apt Elev	7526 708 716
--	------------------------	-----------------------------	---

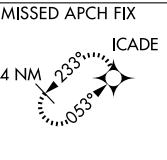
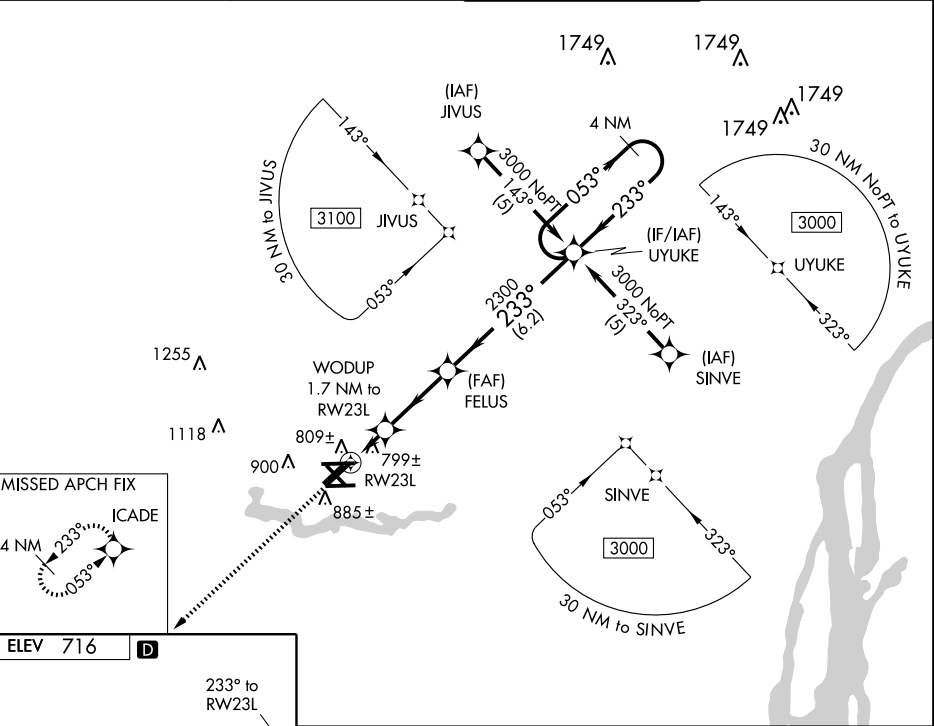
RNAV (GPS) RWY 23L
DETROIT/ WILLOW RUN (YIP)

⚠ Circling to Rwy 5L, 9L, 14, 23R NA at night.
For inoperative MALSR, increase LNAV Cats. A, B, & C visibility to 1 mile,
Cat. D to 1½ miles. For uncompensated Baro-VNAV systems,
LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F).
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

MALSR



MISSED APPROACH: Climb to 3000
direct ICADE and hold.

ATIS 127.425	DETROIT APP CON 118.95 363.2	WILLOW RUN TOWER 125.275 256.9	GND CON 121.75
------------------------	--	--	--------------------------



ELEV 716 **D**

233° to RW23L

		VGSi and RNAV glidepath not coincident.		UYUKE 4 NM Holding Pattern	
* LNAV only		WODUP 1.7 NM to RW23L		053° → 3000 ← 233°	
* 0.9 NM to RW23L		FELUS		GS 3.00° TCH 56	
RW23L		1300 *		2300	
0.9		0.8		3.1 NM	
6.2 NM		C		D	
CATEGORY	A	B	C	D	
LPV DA	980- ¾		272 (300-¾)		
LNAV/VNAV DA	1096- ¾		388 (400-¾)		
LNAV MDA	1060- ¾		352 (400-¾)		1060-1 352 (400-1)
CIRCLING	1200-1		484 (500-1)		1280-2 564 (600-2)

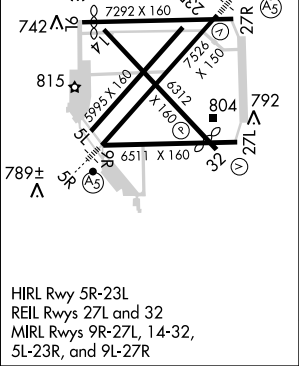
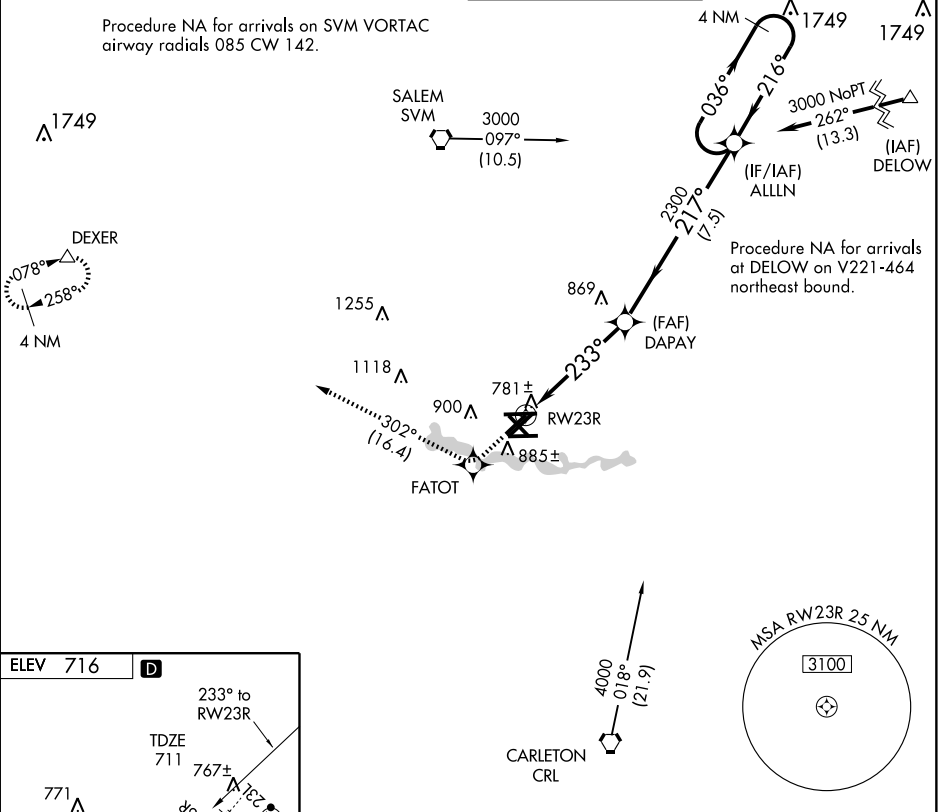
HIRL Rwy 5R-23L
REIL Rwy 27L and 32
MIRL Rwy 9R-27L, 14-32,
5L-23R, and 9L-27R

APP CRS	Rwy Idg	5995
233°	TDZE	711
	Apt Elev	716

RNAV (GPS) RWY 23R

DETROIT/ WILLOW RUN (YIP)

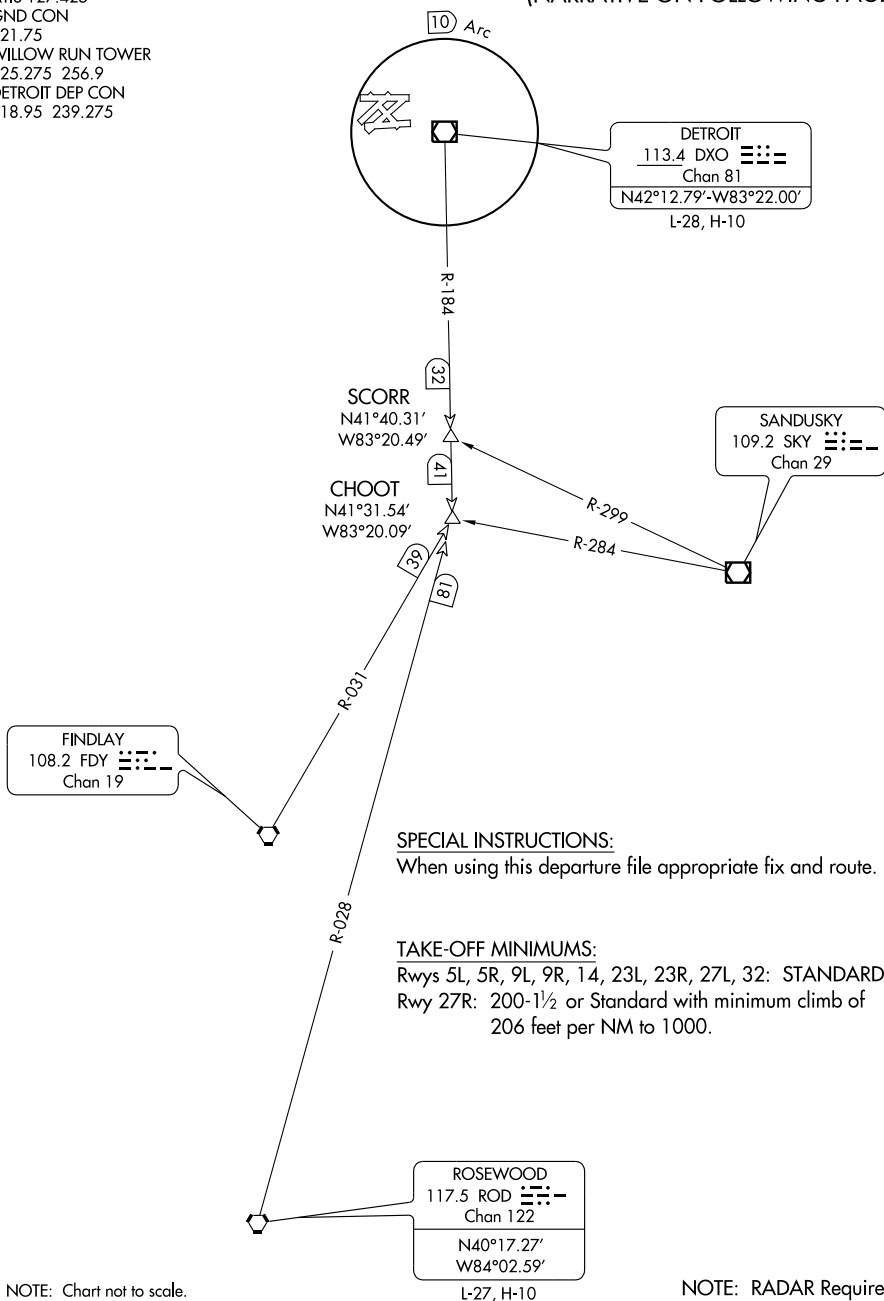
<div><div>▼</div><div>▲ NA</div></div> <div>DME/DME RNP-0.3 NA. Straight-in/Circling to Rwy 23R NA at night. Circling NA at night to Rwy 5L, 9L, 14.</div>	MISSED APPROACH: Climb to 3000 direct FATOT WP and via 302° track to DEXER WP and hold.		
ATIS 127.425	DETROIT APP CON 118.95 363.2	WILLOW RUN TOWER 125.275 256.9	GND CON 121.75



3000	FATOT	302° track	DEXER	ALLN	4 NM Holding Pattern
CATEGORY	A	B	C	D	
LNAV MDA	1120 - 1	409 (500-1)	1120-1¼ 409 (500-1¼)		
CIRCLING	1200 - 1	484 (500-1)	1200 - 1½ 484 (500-1½)	1280 - 2 564 (600-2)	

ATIS 127.425
GND CON
121.75
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 239.275

(NARRATIVE ON FOLLOWING PAGE)



NOTE: Chart not to scale.

NOTE: RADAR Required.

EC-1. 17 DEC 2009 to 14 JAN 2010



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude / flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES

- Rwy 5L: Multiple trees beginning 1438' to 2887' from DER,
from 119' to 438' left of centerline, up to 79' AGL/785' MSL.
- Rwy 5R: Multiple trees beginning 1877' to 2472' from DER,
from 134' to 922' left and right of centerline, up to 78' AGL/777' MSL.
- Rwy 9R: Multiple trees beginning 827' to 2598' from DER,
from 432' to 600' left and right of centerline, up to 77' AGL/780' MSL.
- Rwy 23L: Tree 1304' from DER, 438' right of centerline, 42' AGL/757' MSL.
Tree 2457' from DER, 720' left of centerline, 66' AGL/781' MSL.
- Rwy 23R: Multiple trees and road with vehicle beginning 587' to 1333' from DER,
from 282' to 814' left and right of centerline, up to 77' AGL/793' MSL.
- Rwy 27L: Multiple trees and pole beginning 1273' to 2024' from DER,
from 47' to 769' left and right of centerline, up to 90' AGL/805' MSL.
- Rwy 27R: Railroad and lights beginning 564' to 1565' from DER,
from 4' to 333' left of centerline, up to 54' AGL/770' MSL.
Tree and lights beginning 102' to 1257' from DER,
from 10' to 485' right of centerline, up to 55' AGL/771' MSL.
Tower 7161' from DER, 502' left of centerline, 162' AGL/900' MSL.
- Rwy 32: Multiple trees and poles beginning 701' to 1884' from DER,
from 78' to 750' left of centerline, up to 84' AGL/798' MSL.
Multiple trees 1157' to 1893' from DER,
from 126' to 475' right of centerline, up to 66' AGL/780' MSL.

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON

127.5 239.275

WILLOW RUN ATIS 127.425

PONTIAC ATIS 125.025

COLEMAN A. YOUNG ATIS 124.875

WINDSOR ATIS 134.5

SELFREDGE ATIS 125.325 270.1

SPRTN

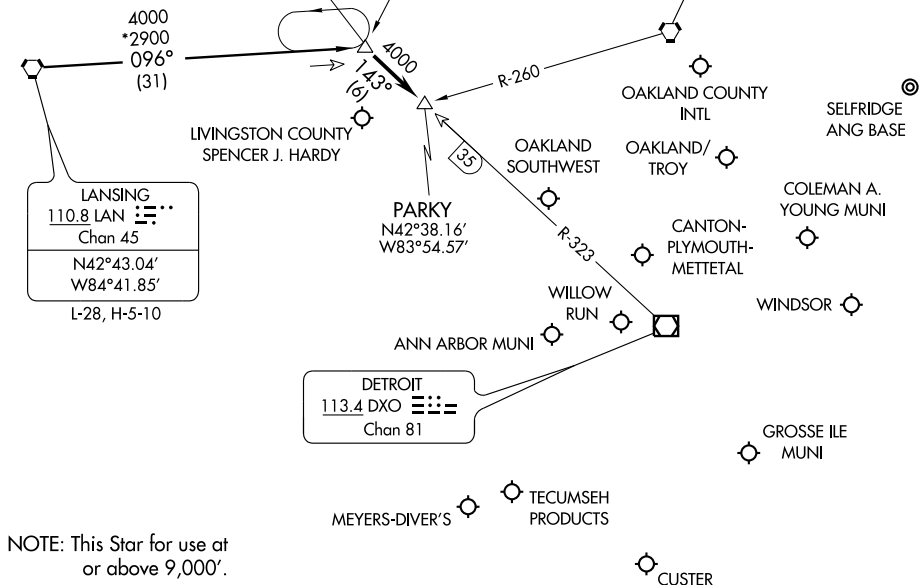
N42°42.52'-W84°00.23'

VERTICAL NAVIGATION

PLANNING INFORMATION

TURBOJETS/TURBOPROPS:

Expect clearance to cross at 9000'.



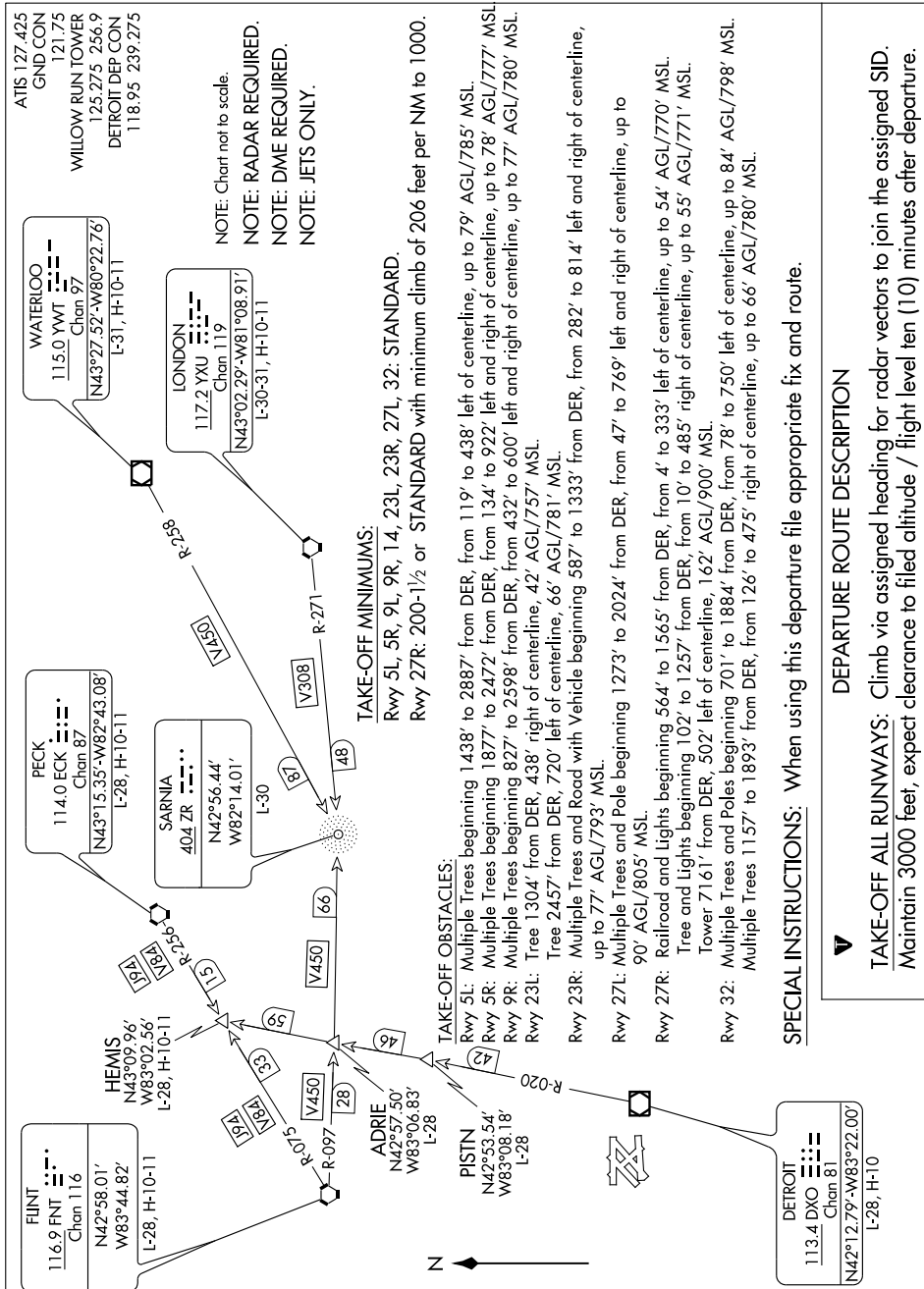
LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence

. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ,

1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence

. . . . Expect radar vectors to final approach course.

ST. CLAIR THREE DEPARTURE

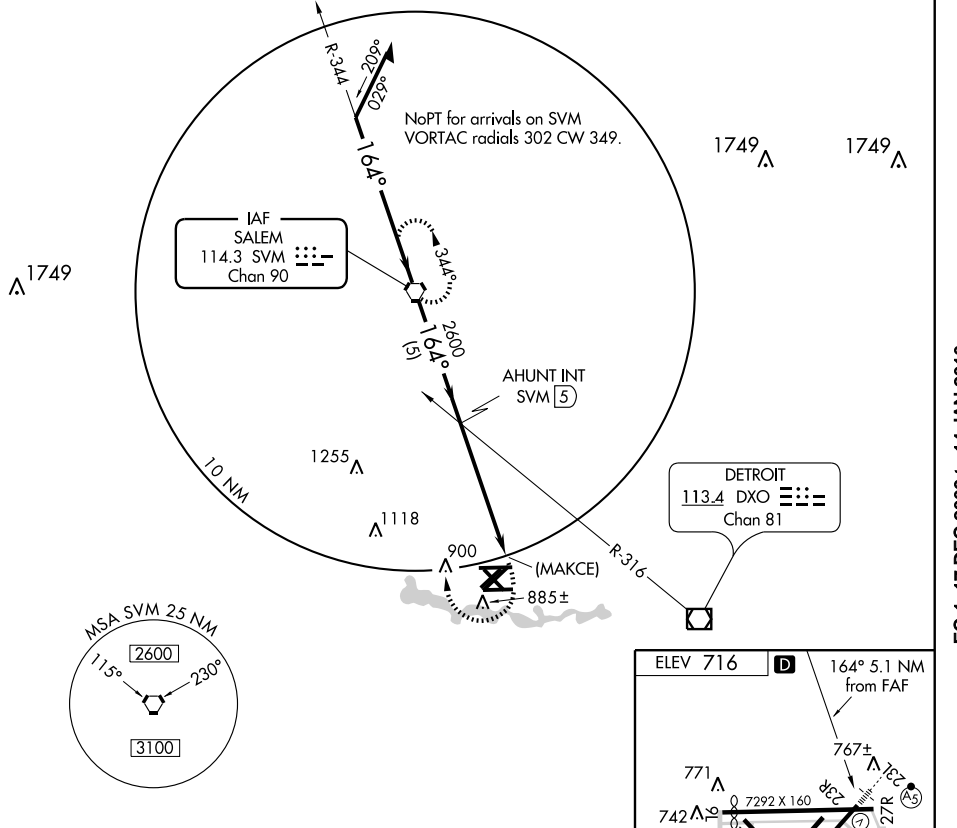
DETROIT/ WILLOW RUN (YIP)
SL-467 (FAA) DETROIT, MICHIGAN

▽

▲

MISSED APPROACH: Climbing right turn to 2600 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	WILLOW RUN TOWER	GND CON
127.425	118.95 363.2	125.275 256.9	121.75



Remain within 10 NM

VORTAC

AHUNT INT SVM (5)

2600

344°

164°

2600

164°

(MAKCE) SVM (10.1)

5 NM

5.1 NM

CATEGORY	A	B	C	D
CIRCLING	1420-1	704 (800-1)	1420-2 704 (800-2)	1420-2 ¼ 704 (800-2 ¼)

ELEV 716

D

164° 5.1 NM from FAF

771

742

815

789±

7292 X 160

7325 X 150

6312

804

792

27L

27R

27L

27R

HIRL Rwy 5R-23L

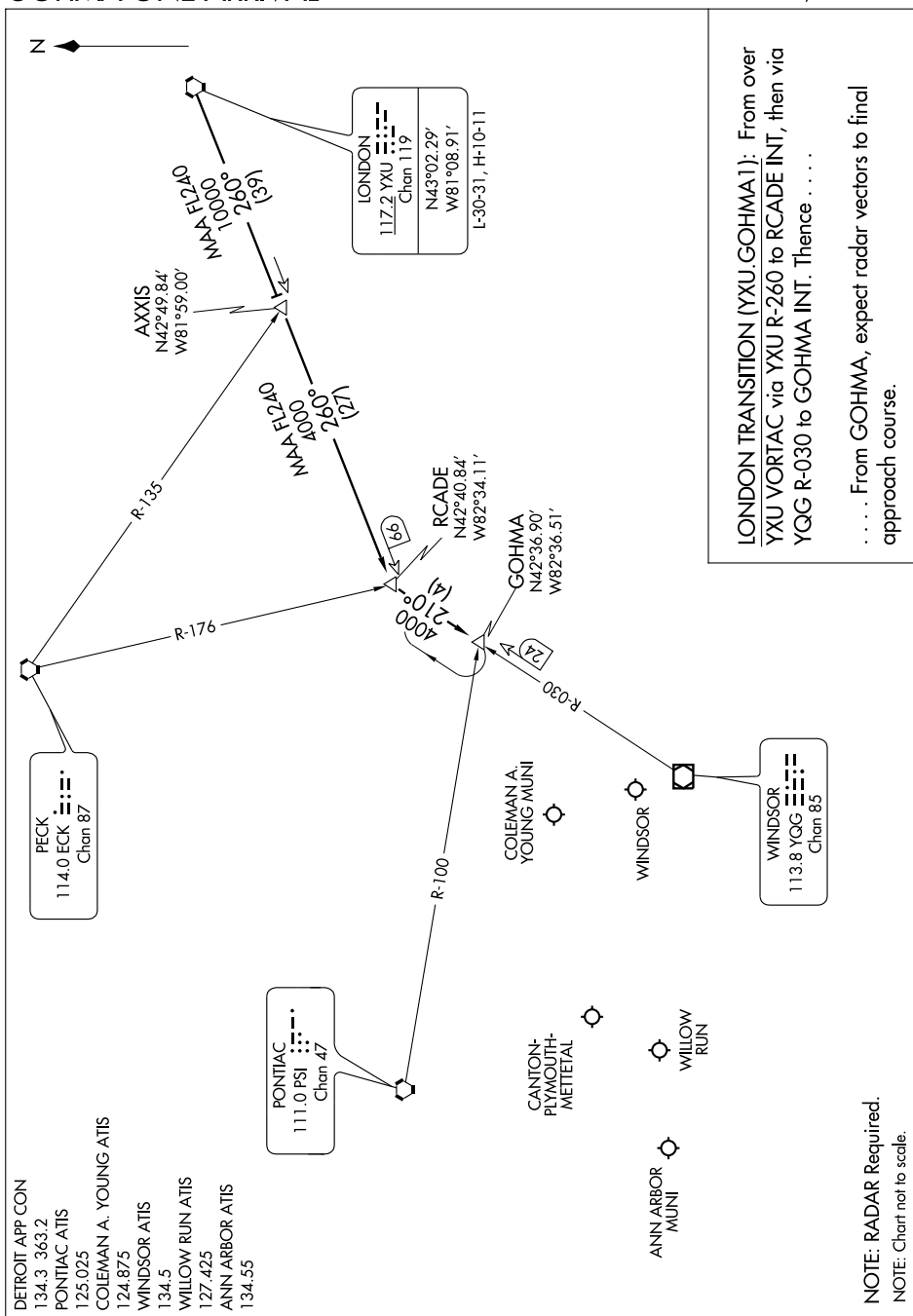
REIL Rwy 27L and 32

MIRL Rwy 9R-27L, 14-32, 5L-23R, and 9L-27R

FAF to MAP 5.1 NM

Knots	60	90	120	150	180
Min:Sec	5:06	3:24	2:33	2:02	1:42

GOHMA ONE ARRIVAL



SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON

127.5 239.275

WILLOW RUN ATIS 127.425

PONTIAC ATIS 125.025

COLEMAN A. YOUNG ATIS 124.875

WINDSOR ATIS 134.5

SELFREDGE ATIS 125.325 270.1

SPRTN

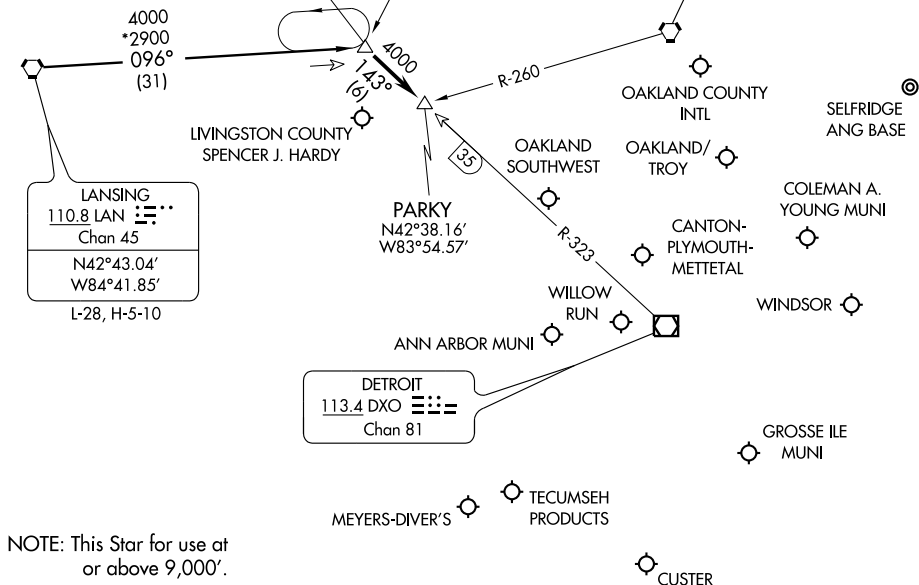
N42°42.52'-W84°00.23'

VERTICAL NAVIGATION

PLANNING INFORMATION

TURBOJETS/TURBOPROPS:

Expect clearance to cross at 9000'.



LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence

. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ,

1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence

. . . . Expect radar vectors to final approach course.

DETROIT, MICHIGAN



ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUX INT. Thence

FORT WAYNE TRANSITION (FWA.CRUX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUX INT. Thence

LITCHFIELD TRANSITION (LFD.CRUX4): From over LFD VORTAC via LFD R-106 to CRUX INT. Thence

. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUX INT via 025° heading.

. . . . Aircraft landing YIP or ARB: From over CRUX INT via 050° heading.
Expect radar vector to final approach course.

NDB RWY 4

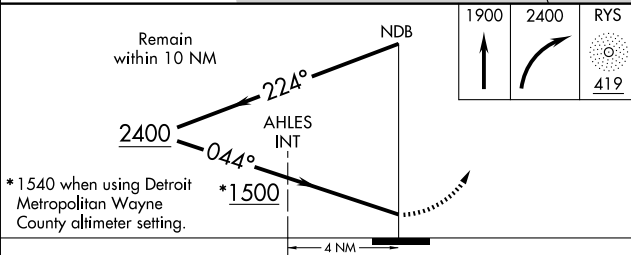
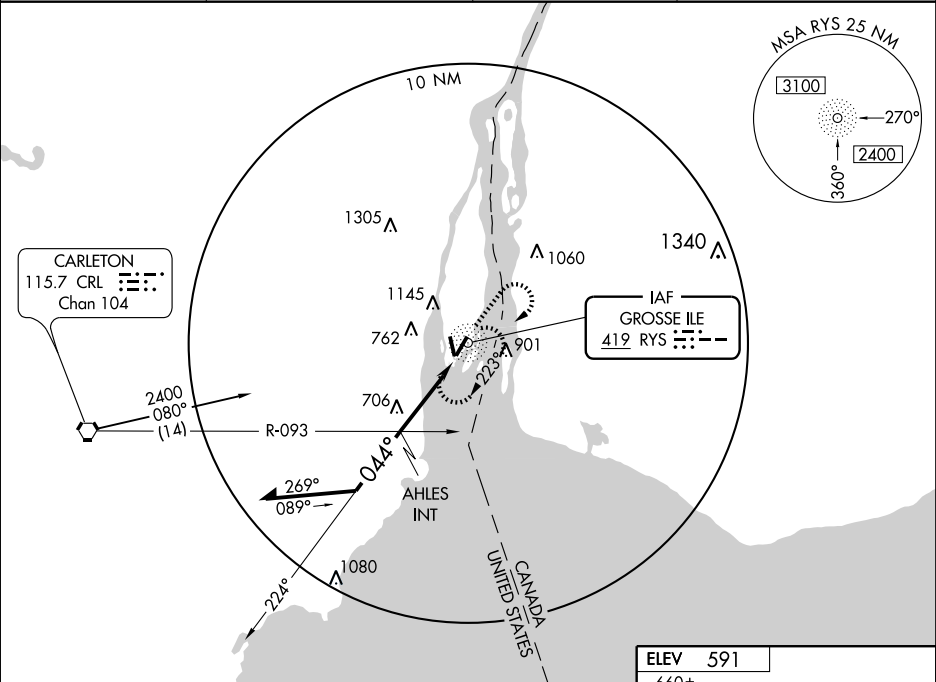
DETROIT / GROSSE ILE MUNI (ONZ)

NDB RYS	APP CRS	Rwy Idg	4846
419	044°	TDZE	590
		Apt Elev	591

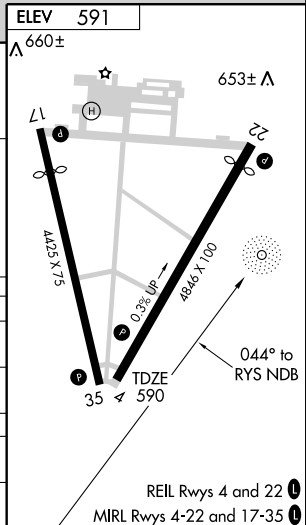
Visibility reduction by helicopters NA. When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase all MDA 40 feet. Increase AHLES fix minimums Circling Cat A, C, and D visibilities ¼ mile.

MISSED APPROACH: Climb to 1900 then climbing right turn to 2400 direct RYS NDB and hold.

AWOS-3 119.675	DETROIT APP CON 134.3 363.2	GCO 121.725	UNICOM 123.0 (CTAF)
-------------------	--------------------------------	----------------	------------------------



CATEGORY	A	B	C	D
S-4	1500-1¼	910 (1000-1¼)	1500 - 2¾ 910 (1000-2¾)	1500 - 3 910 (1000-3)
CIRCLING	1500-1¼	909 (1000-1¼)	1500 - 2¾ 909 (1000-2¾)	1500 - 3 909 (1000-3)
AHLES FIX MINIMUMS				
S-4	1140 - 1	550 (600-1)	1140 - 1½ 550 (600-1½)	1140 - 1¾ 550 (600-1¾)
CIRCLING	1460 - 1 869 (900-1)	1460 - 1¼ 869 (900-1¼)	1460 - 2½ 869 (900-2½)	1460 - 2¾ 869 (900-2¾)



APP CRS	Rwy Idg	4846
037°	TDZE	590
	Apt Elev	591

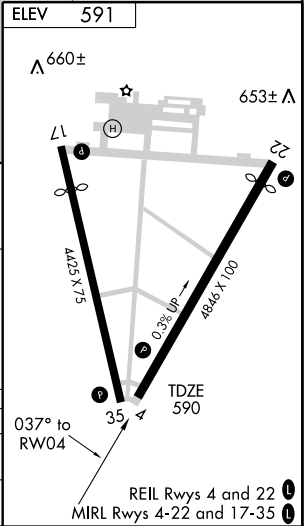
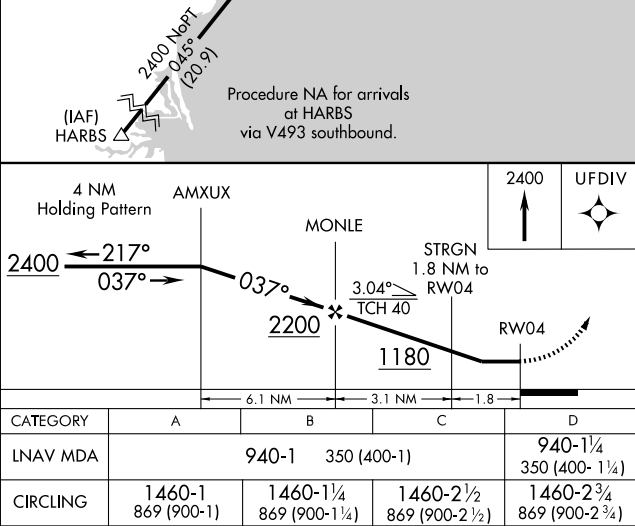
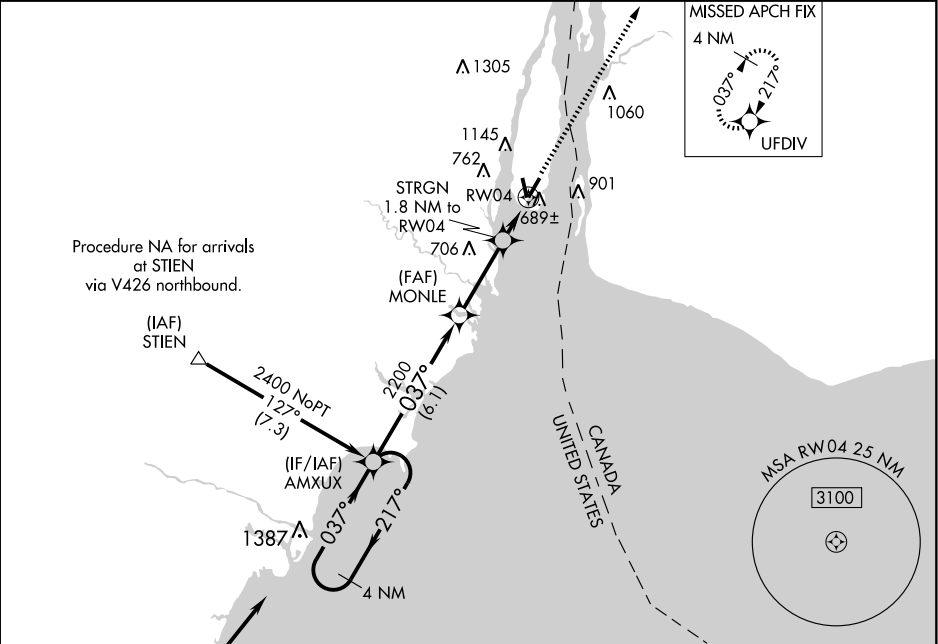
RNAV (GPS) RWY 4
DETROIT / GROSSE ILE MUNI (ONZ)

▼ DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase all MDA 40 feet and Circling visibilities Cat A, C, and D ¼ mile.

▲

MISSED APPROACH: Climb to 2400 direct UFDIV and hold.

AWOS-3 119.675	DETROIT APP CON 134.3 363.2	GCO 121.725	UNICOM 123.0 (CTAF) 0
-------------------	--------------------------------	----------------	---------------------------------



APP CRS	Rwy Idg	4418
217°	TDZE	591
	Apt Elev	591

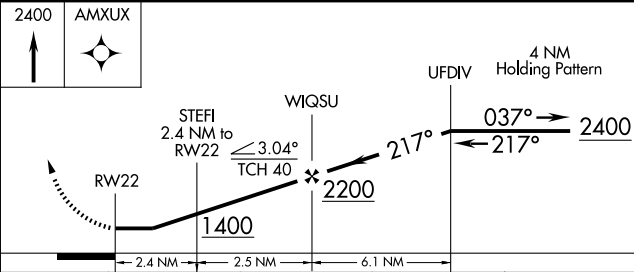
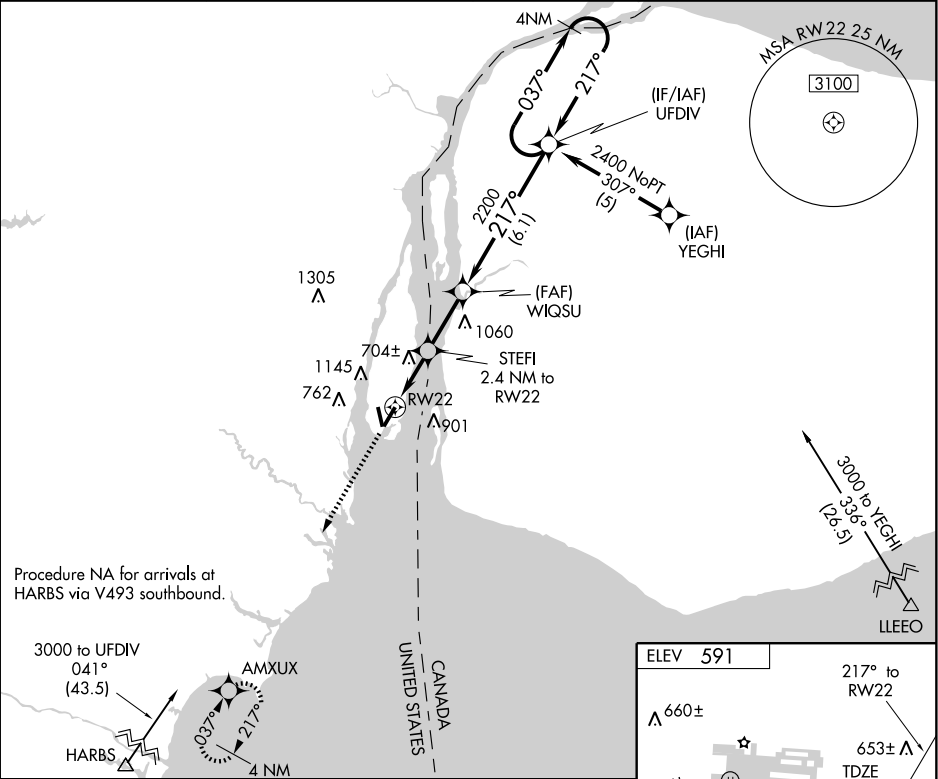
RNAV (GPS) RWY 22

DETROIT / GROSSE ILE MUNI (ONZ)

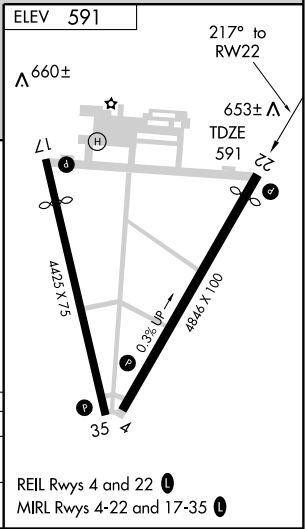
⚠ DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase all MDA 40 feet. Increase LNAV Cat C and Circling Cat A, C, and D visibilities ¼ mile.

MISSED APPROACH: Climb to 2400 direct AMXUX and hold.

AWOS-3 119.675	DETROIT APP CON 134.3 363.2	GCO 121.725	UNICOM 123.0 (CTAF) 1
-------------------	--------------------------------	----------------	---------------------------------



CATEGORY	A	B	C	D
LNAV MDA	960-1	369 (400-1)		960-1¼ 369 (400-1¼)
CIRCLING	1460-1 869 (900-1)	1460-1¼ 869 (900-1¼)	1460-2½ 869 (900-2½)	1460-2¾ 869 (900-2¾)



SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON

127.5 239.275

WILLOW RUN ATIS 127.425

PONTIAC ATIS 125.025

COLEMAN A. YOUNG ATIS 124.875

WINDSOR ATIS 134.5

SELFREDGE ATIS 125.325 270.1

SPRTN

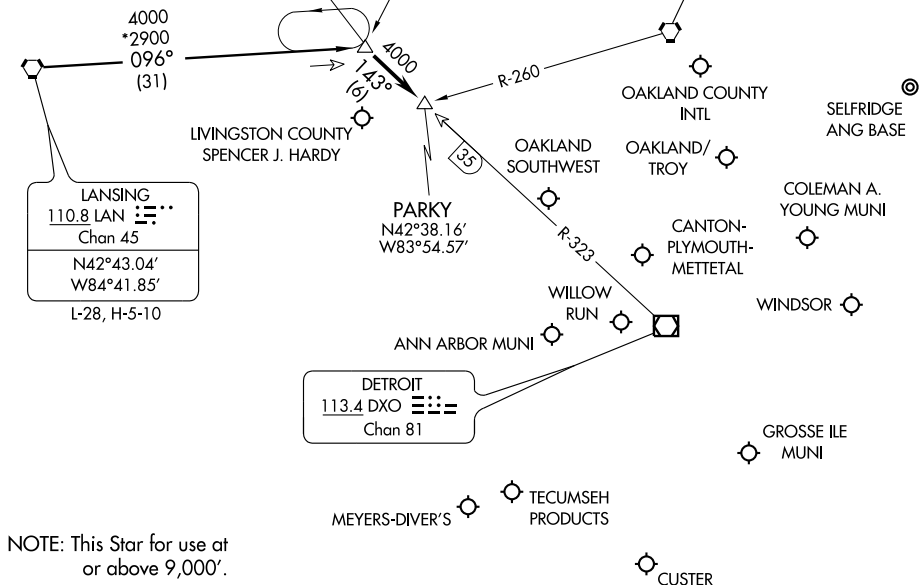
N42°42.52'-W84°00.23'

VERTICAL NAVIGATION

PLANNING INFORMATION

TURBOJETS/TURBOPROPS:

Expect clearance to cross at 9000'.



NOTE: This Star for use at or above 9,000'.

NOTE: Chart not to scale.

LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence

. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ,

1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence

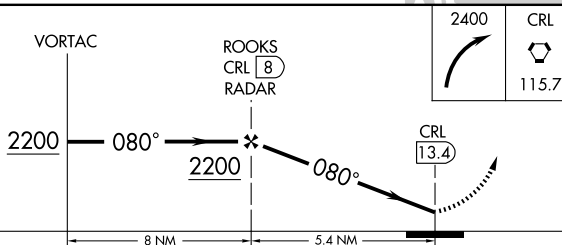
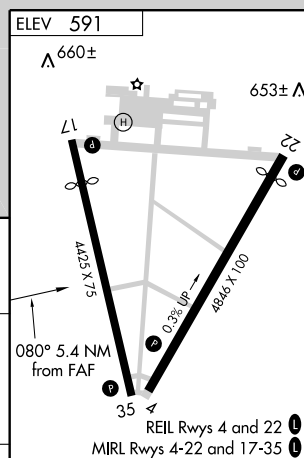
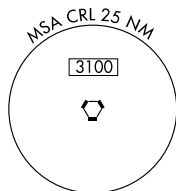
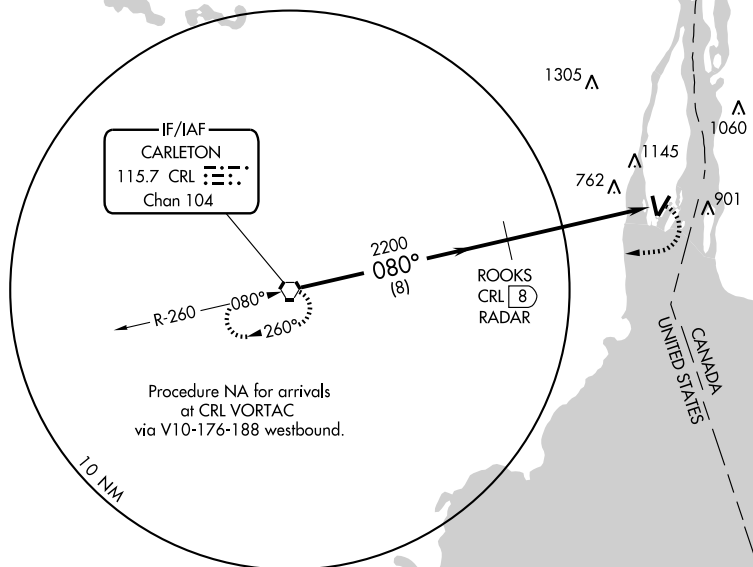
. . . . Expect radar vectors to final approach course.

VOR-A
DETROIT / GROSSE ILE MUNI (ONZ)

MISSED APPROACH: Climbing right turn to 2400 direct CRL VORTAC and hold.

UNICOM
123.0 (CTAF) **L**

RADAR REQUIRED





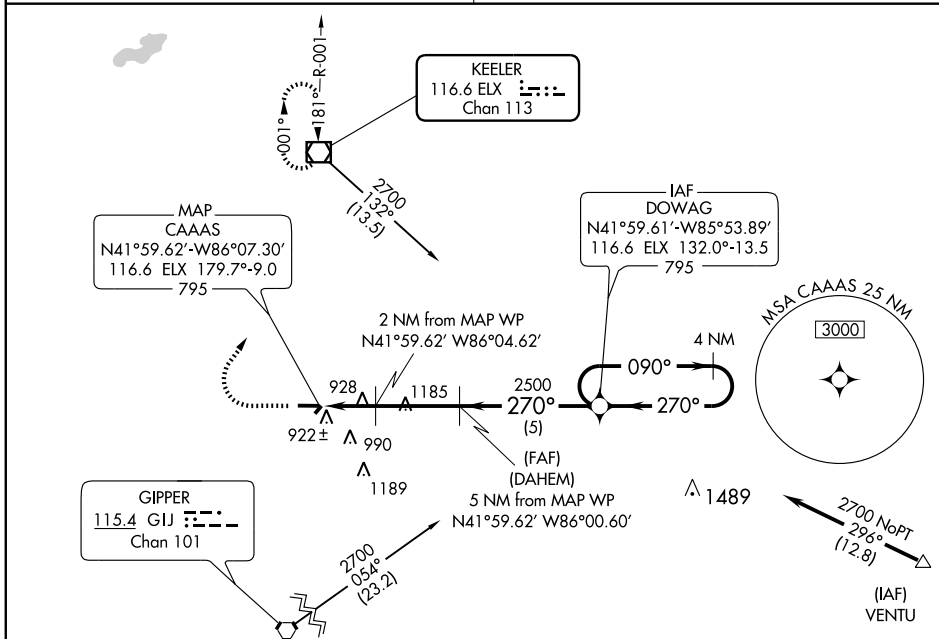
CATEGORY	A	B	C	D	FAF to MAP 5.4 NM					
CIRCLING	1460 - 1	1460 - 1¼	1460 - 2½	1460 - 2¾	Knots	60	90	120	150	180
	869 (900-1)	869 (900-1¼)	869 (900-2½)	869 (900-2¾)	Min:Sec	5:24	3:36	2:42	2:10	1:48

VOR/DME ELX 116.6 Chan 113	APP CRS 270°	Rwy Idg TDZE Apt Elev	4700 748 748
--	------------------------	-----------------------------	---

VOR/DME RNAV or GPS RWY 27

DOWAGIAC MUNI (C91)

  NA	Obtain local altimeter setting on CTAF; when not received, use South Bend altimeter setting.	MISSED APPROACH: Climb to 2500 then right turn direct ELX VOR/DME and hold.
SOUTH BEND APP CON ★ 118.55 257.8		UNICOM 122.8 (CTAF) 1



ELEV 748

270° to MAP WP

TDZE 748

4700 X 100

27

2176 X 100

☆

2500

↑

ELX

116.6

4 NM

Holding Pattern

(DAHEM)

5 NM from MAP WP

2 NM from MAP WP

CAAAS MAP WP

2 NM

3 NM

5 NM

DOWAG WP

270°

090° →

← 270°

2700

1540

2500

CATEGORY	A	B	C	D
S-27	1300-1	552 (600-1)	1300-1½ 552 (600-1½)	1300-1¾ 552 (600-1¾)
CIRCLING	1300-1	552 (600-1)	1340-1½ 592 (600-1½)	1340-2 592 (600-2)

SOUTH BEND ALTIMETER SETTING MINIMUMS

S-27	1360-1	612 (700-1)	1360-1¾ 612 (700-1¾)	1360-2 612 (700-2)
CIRCLING	1360-1	612 (700-1)	1400-1¾ 652 (700-1¾)	1400-2 652 (700-2)

REIL Rwy 9 and 27

MIRL Rwy 9-27

REIL Rwy 9 and 27 1

MIRL Rwy 9-27 1

NA

Obtain local altimeter setting on CTAF; when not received, use South Bend, Indiana altimeter setting.

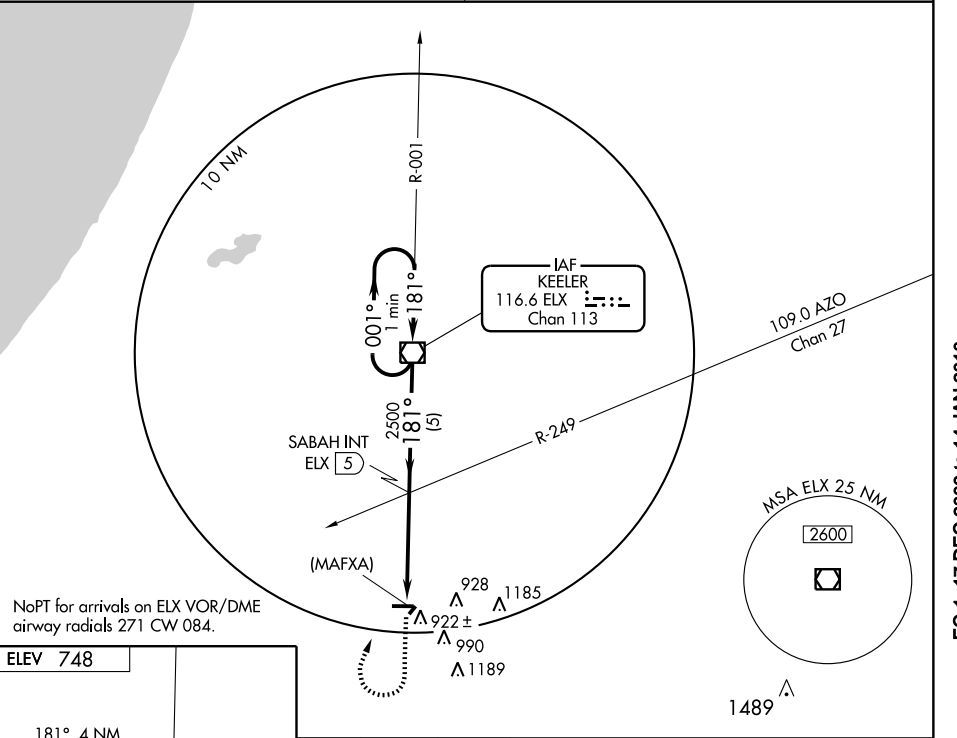
MISSED APPROACH: Climb to 2500 then right turn direct ELX VOR/DME and hold.

SOUTH BEND APP CON ★

118.55 257.8

UNICOM

122.8 (CTAF) 1



ELEV 748

181° 4 NM from FAF

4700 X 100

2176 X 100

REIL Rwys 9 and 27 1
MIRL Rwy 9-27 1

FAF to MAP 4 NM

Knots	60	90	120	150	180
Min:Sec	4:00	2:40	2:00	1:36	1:20

2500

ELX 116.6

SABAH INT ELX 5

(MAFXA) ELX 9

2500

4 NM

5 NM

VOR/DME One Minute Holding Pattern

001° → 2500

← 181°

CATEGORY	A	B	C	D
CIRCLING	1300-1 552 (600-1)		1340-1½ 592 (600-1½)	1340-2 592 (600-2)

SOUTH BEND INDIANA ALTIMETER SETTING MINIMUMS

CIRCLING	1360-1 612 (700-1)	1400-1¾ 652 (700-1¾)	1400-2 652 (700-2)
----------	--------------------	----------------------	--------------------

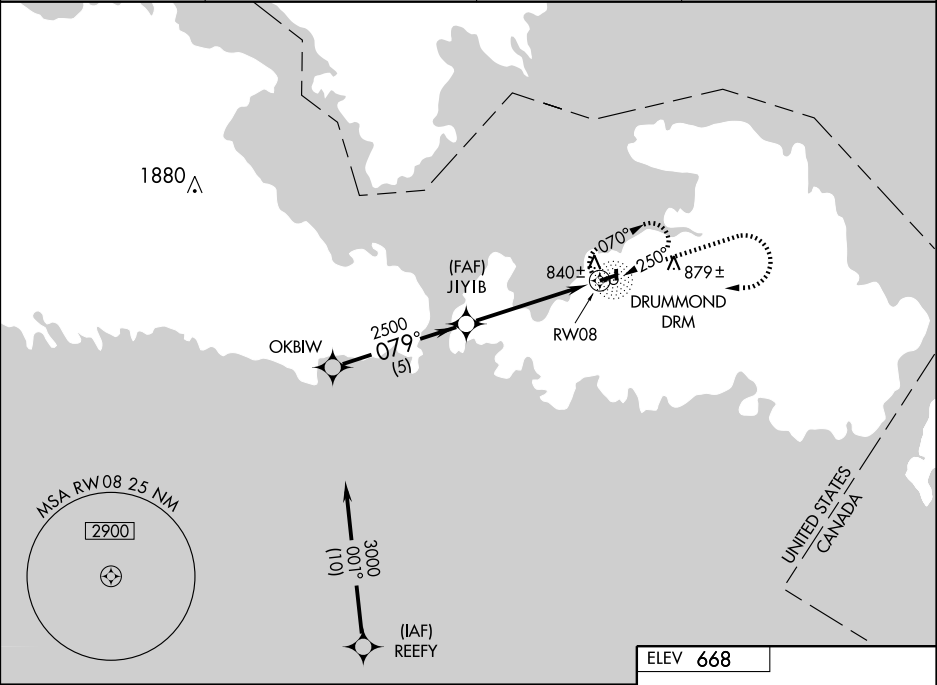
APP CRS 079°	Rwy Idg TDZE Apt Elev 661 668	3350 661 668
------------------------	---	---

GPS RWY 8
DRUMMOND ISLAND (DRM)

Obtain local altimeter setting on CTAF; when not received, use Sault Ste Marie Chippewa County Intl altimeter setting.

MISSED APPROACH: Climb to 1700, then climbing right turn to 2300 direct DRM NDB and hold.

AWOS-3 118.325	TORONTO CENTER 132.65 344.5	GCO 121.725	UNICOM 122.8 (CTAF)
--------------------------	---------------------------------------	-----------------------	-------------------------------



OKBIW

3000

Procedure Turn NA

079°

J1Y1B

2500

5 NM

5.1 NM

RW08

1700

2300

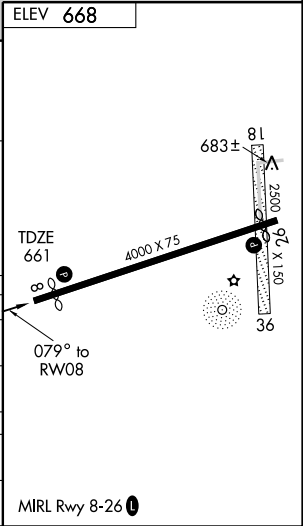
DRM

218

CATEGORY	A	B	C	D
S-8	1100-1	439 (500-1)	1100-1¼ 439 (500-1¼)	NA
CIRCLING	1160-1	492 (500-1)	1160-1½ 492 (500-1½)	NA

SAULT STE MARIE CHIPPEWA CO INTL ALTIMETER SETTING MINIMUMS

S-8	1200-1	539 (600-1)	1200-1½ 539 (600-1½)	NA
CIRCLING	1260-1	592 (600-1)	1260-1½ 592 (600-1½)	NA



APP CRS
259°

Rwy Idg
TDZE
Apt Elev

3830
661
668

GPS RWY 26

DRUMMOND ISLAND (DRM)



ANA

Obtain local altimeter setting on CTAF; when not received, use Sault Ste Marie Chippewa County Intl altimeter setting.

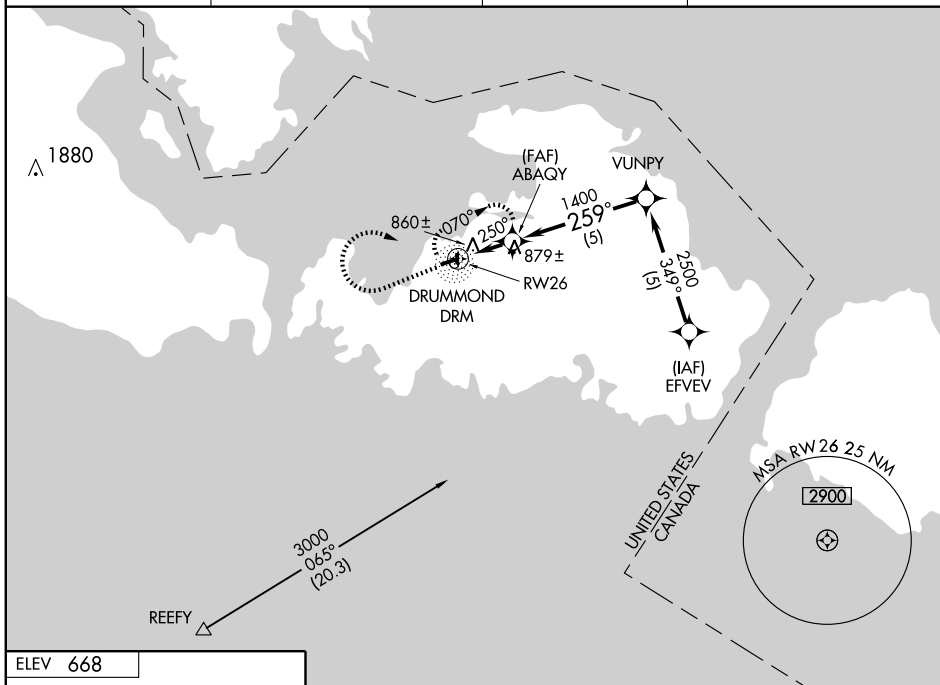
MISSED APPROACH: Climb to 1700, then climbing right turn to 2300 direct DRM NDB and hold.

AWOS-3
118.325

TORONTO CENTER
132.65 344.5

GCO
121,725

UNICOM
122.8 (CTAF) **L**



EC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 668

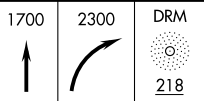
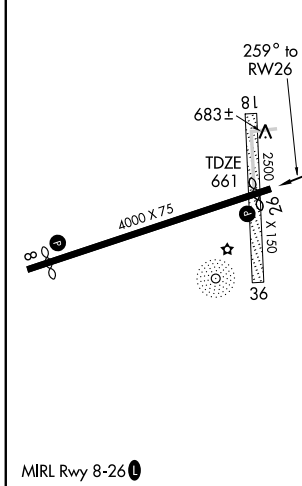


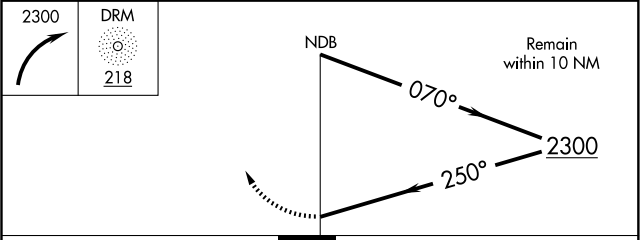
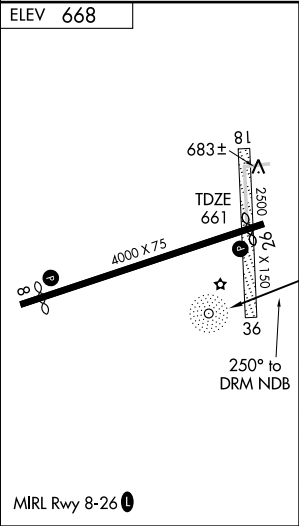
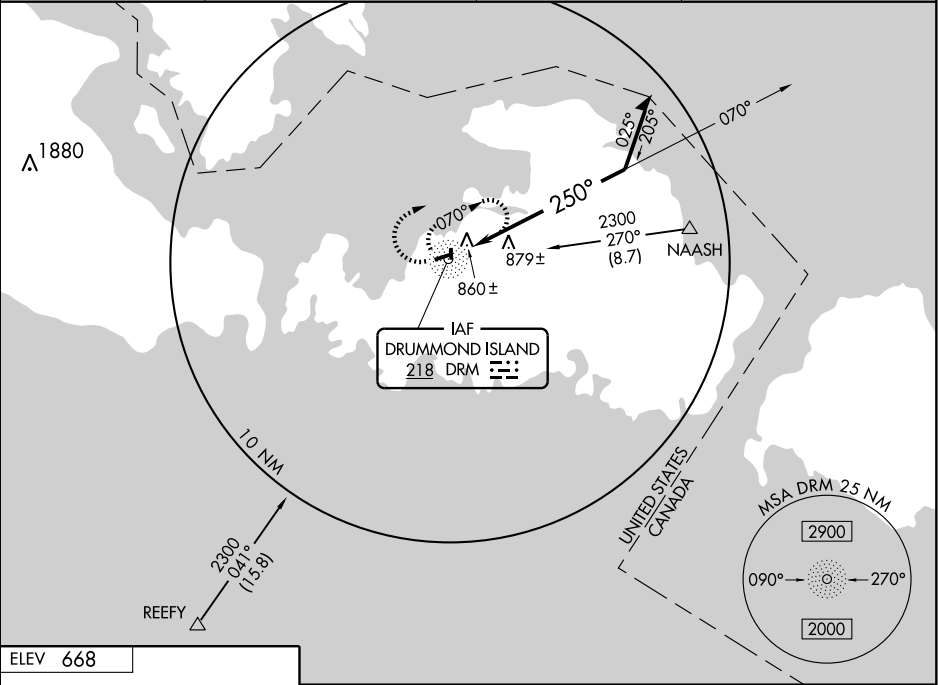
Diagram illustrating the ABAQY procedure turn. The turn is defined by a 2.1 NM distance from the runway (RW26) to the 1400m altitude point, and a 5 NM distance to the 2500m altitude point. The turn angle is 259°. The procedure turn is labeled "Procedure Turn NA".

NDB DRM	APP CRS	Rwy Idg	3830
218	250°	TDZE	661
		Apt Elev	668

NDB RWY 26
DRUMMOND ISLAND (DRM)

NA	Obtain local altimeter setting on CTAF; when not received, use Sault Ste Marie Chippewa County Intl altimeter setting.	MISSED APPROACH: Climbing right turn to 2300 in DRM NDB holding pattern.
----	--	--

AWOS-3 118.325	TORONTO CENTER 132.65 344.5	GCO 121.725	UNICOM 122.8 (CTAF)
-------------------	--------------------------------	----------------	------------------------



CATEGORY	A	B	C	D
S-26	1220-1	559 (600-1)	1220-1½ 559 (600-1½)	NA
CIRCLING	1220-1	552 (600-1)	1220-1½ 552 (600-1½)	NA
SAULT STE MARIE CHIPPEWA CO INTL ALTIMETER MINIMA				
S-26	1320-1	659 (700-1)	1320-1¾ 659 (700-1¾)	NA
CIRCLING	1320-1	652 (700-1)	1320-1¾ 652 (700-1¾)	NA

▼

▲ NA

Use Oscoda-Wurtsmith altimeter setting.

MISSED APPROACH: Climb to 2500 then right turn direct ASP VOR/DME and hold.

<div>OSCODA-WURTSMITH</div> <div>AWOS-3</div> <div>116.1</div>	<div>MINNEAPOLIS CENTER</div> <div>118.525 251.15</div>	<div>UNICOM</div> <div>122.8 (CTAF)</div>	<div>122.85 0</div>
--	---	---	---------------------

CATEGORY	A	B	C	D	FAF to MAP 8.1 NM					
CIRCLING	1120 - 1	514 (600-1)	1120 - 1½ 514 (600-1½)	1280 - 2¼ 674 (700-2¼)	Knots	60	90	120	150	180
					Min:Sec	8:06	5:24	4:03	3:14	2:42

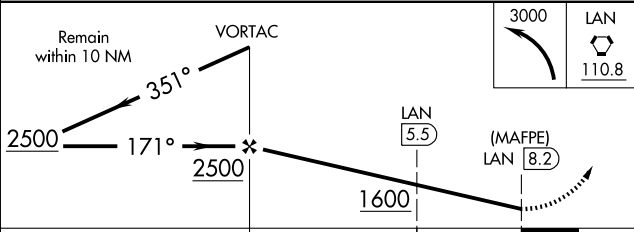
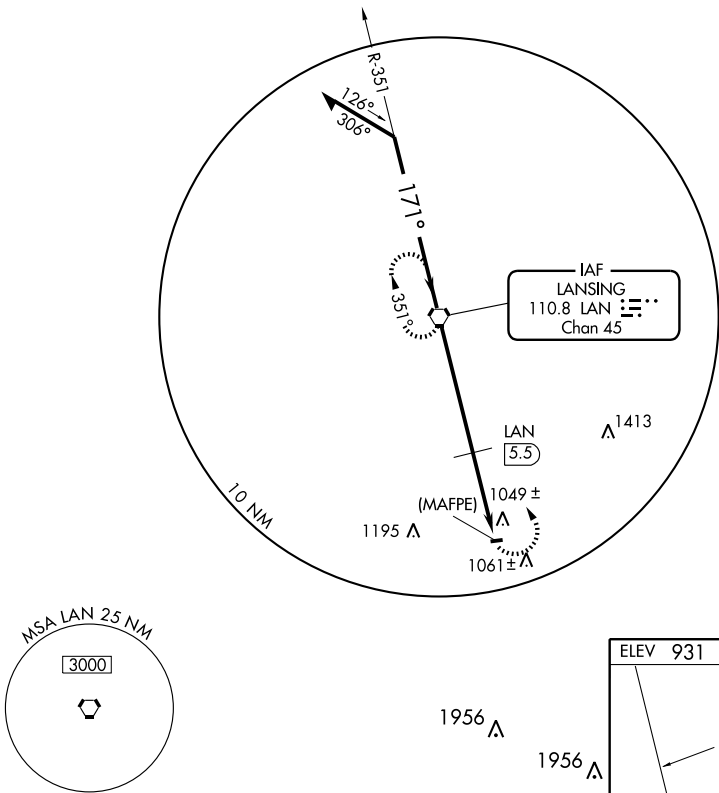
EC-1.17 DEC 2009 to 14 JAN 2010

VORTAC LAN 110.8 Chan 45	APP CRS 171°	Rwy Idg TDZE Apt Elev	N/A N/A 931
--------------------------------	-----------------	-----------------------------	-------------------

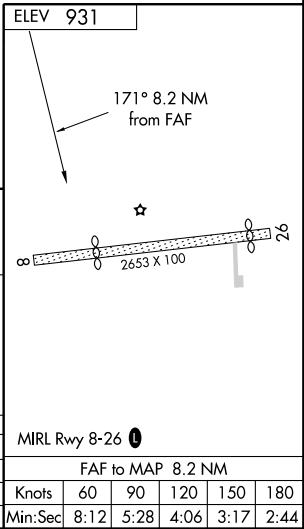
VOR or GPS-A

EATON RAPIDS / SKYWAY ESTATES (60)G

 NA Use Lansing alimeter setting.	MISSED APPROACH: Climbing left turn to 3000 direct LAN VORTAC and hold.
LANSING APP CON 118.65 226.4	CTAF 122.9 



CATEGORY	A	B	C	D
CIRCLING	1600-1	669 (700-1)	NA	NA
DME MINIMUMS				
CIRCLING	1400-1	469 (500-1)	NA	NA



LOC I-ESC	APP CRS	Rwy Idg	6498
<u>109.3</u>	094°	TDZE	609
		Apt Elev	609

ILS or LOC RWY 9
ESCANABA / DELTA COUNTY (ESC)



MISSED APPROACH: Climb to 2100 then climbing right turn to 2500 direct ESC VOR/DME and hold, continue climb-in-hold to 2500.

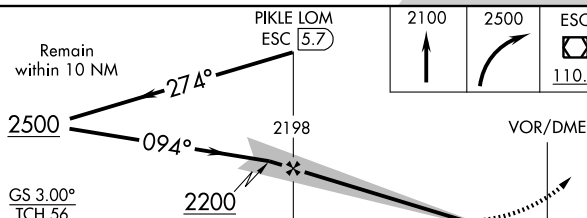
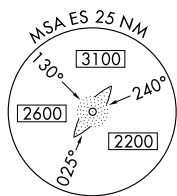
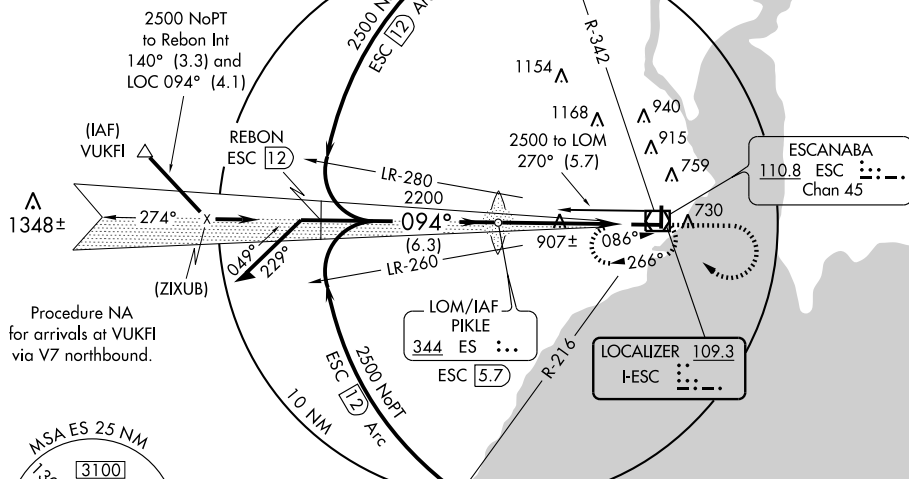
AWOS-3
121,425




MINNEAPOLIS CENTER
127.65

UNICOM
122.8 (CTAF) **L**

ADF or DME REQUIRED

CAUTION: Magnetic disturbances of as much as 14° exist at ground level at Escanaba.



CATEGORY		A		B		C		D		HIRL Rwy 9-27  MIRL Rwy 18-36  REIL Rwy 36 
S-ILS 9		809-½ 200 (200-½)								
S-LOC 9		1160-½ 551 (600-½)		1160-1 551 (600-1)		1160-1¼ 551 (600-1¼)		1160-1¼ 551 (600-1¼)		
CIRCLING		1160-1 551 (600-1)		1240-1¾ 631 (700-1¾)		1280-2¼ 671 (700-2¼)		1280-2¼ 671 (700-2¼)		FAF to MAP 4.8 NM Knots 60 90 120 150 180 Min:Sec 4:48 3:12 2:24 1:55 1:36

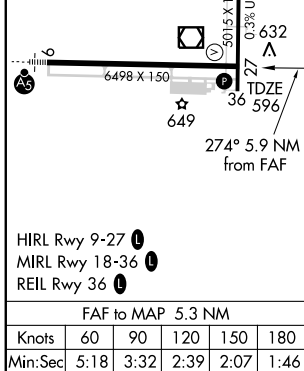
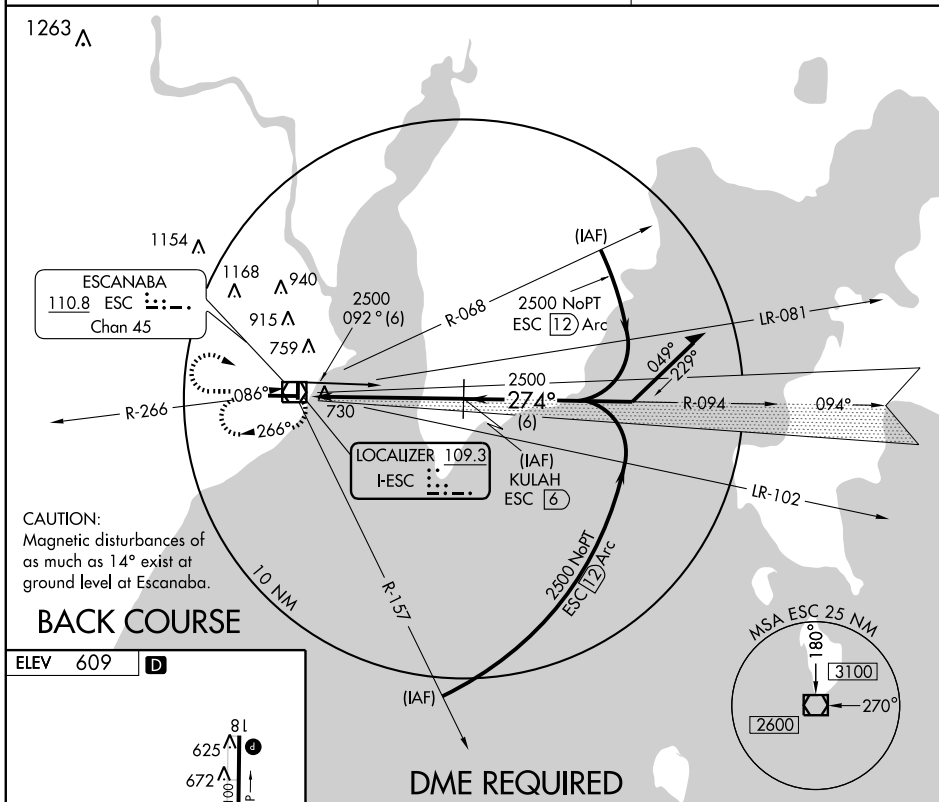
LOC I-ESC 109.3	APP CRS 274°	Rwy Idg TDZE Apt Elev	6498 596 609
---------------------------	------------------------	-----------------------------	---

LOC BC RWY 27

ESCANABA / DELTA COUNTY (ESC)

DME from ESC VOR/DME. Simultaneous reception of I-ESC and ESC DME required.	MISSED APPROACH: Climb to 2500 then right turn direct ESC VOR/DME and hold.
---	--

AWOS-3 121.425	MINNEAPOLIS CENTER 127.65	UNICOM 122.8 (CTAF) 0
--------------------------	-------------------------------------	--



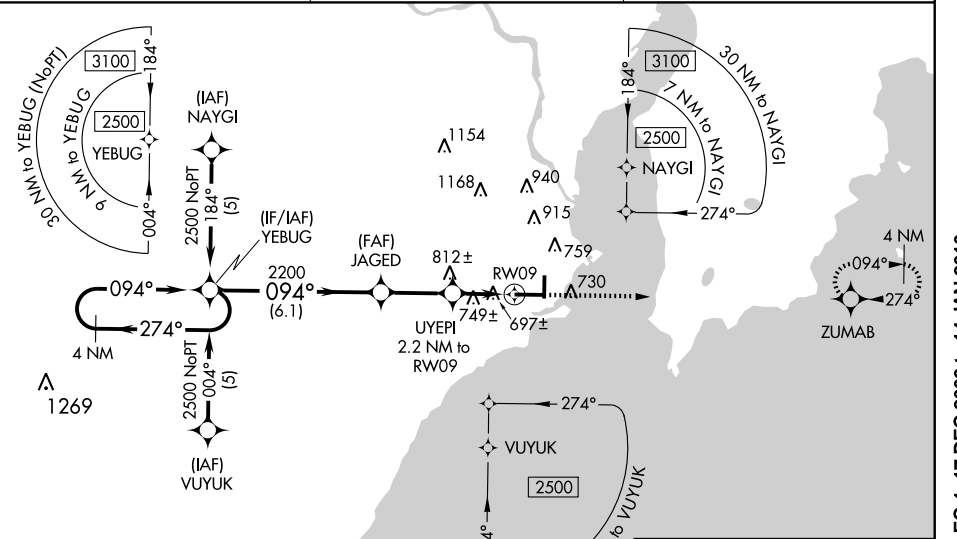
DME REQUIRED				
2500	ESC	KULAH ESC 6	Remain within 10 NM	
			Disregard glide slope indications.	
VOR/DME	ESC 0.8	274°	2500	274°
0.6	5.3 NM	2.95°	TCH 60	
CATEGORY	A	B	C	D
S-27	980-1	384 (400-1)	980-1 1/4	384 (400-1 1/4)
CIRCLING	1060-1	1100-1	1240-1 1/4	1280-2 1/4
	451 (500-1)	491 (500-1)	631 (700-1 1/4)	671 (700-2 1/4)

⚠ For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Sawyer Intl altimeter setting and increase LPV DA to 987, LNAV/VNAV DA to 1145, increase all MDA 180 feet, increase LPV visibility all Cats ¼ mile, LNAV/VNAV visibility all Cats ½ mile, increase LNAV Cat C visibility ½ mile, LNAV Cat D visibility ¼ mile, increase Circling Cat C visibility ¾ mile, and Circling Cat D visibility ½ mile. For inoperative MALS, increase LNAV Cat D visibility to 1¼. For inoperative MALS, when using Sawyer Intl altimeter setting, increase LPV all Cats visibility to 1¼. VDP NA when using Sawyer Intl altimeter setting. Baro-VNAV NA when using Sawyer Intl altimeter setting.

MALS

MISSED APPROACH:
Climb to 2500 direct ZUMAB and hold.

AWOS-3 121.425	MINNEAPOLIS CENTER 127.65	UNICOM 122.8 (CTAF) 1
-------------------	------------------------------	---------------------------------



CAUTION: Magnetic disturbances of as much as 14° exist at ground level at Escanaba.

ELEV 609 **D**

4 NM Holding Pattern

YEBUG

JAGED

UYEPI 2.2 NM to RW09

*LNAV only

2500

ZUMAB

2200

*1360

RW09

6.1 NM

2.6 NM

1.1

1.1

GS 3.00 TCH 56

CATEGORY	A	B	C	D
LPV DA	809-½		200 (200-½)	
LNAV/VNAV DA	967-¾		358 (400-¾)	
LNAV MDA	1000-½ 391 (400-½)		1000-1 391 (400-1)	
CIRCLING	1060-1	451 (500-1)	1240-1¾ 631 (700-1¾)	1280-2¼ 671 (700-1¼)

HIRL Rwy 9-27 **1**

MIRL Rwy 18-36 **1**

REIL Rwy 36 **1**

EC-1, 17 DEC 2009 to 14 JAN 2010

APP CRS	Rwy Idg	6498
274°	TDZE	596
	Apt Elev	609

RNAV (GPS) RWY 27

ESCANABA / DELTA COUNTY (ESC)

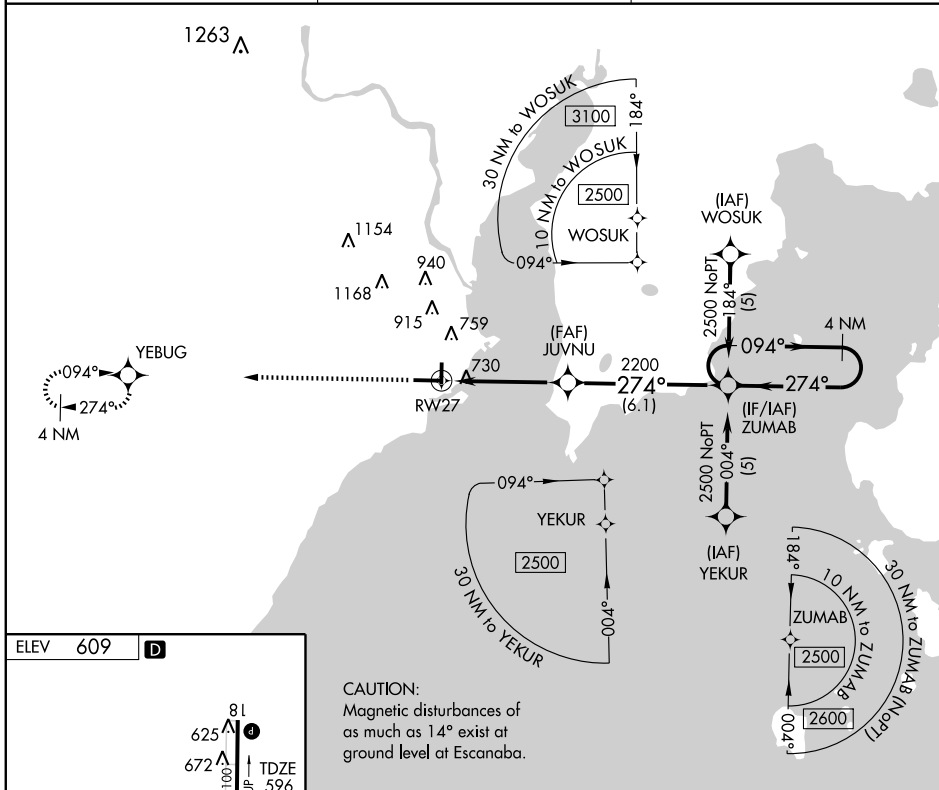
- V** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Sawyer Intl altimeter setting and increase all MDA 180 feet, increase LNAV Cat C and D visibility $\frac{1}{2}$ mile, increase Circling Cat C visibility $\frac{3}{4}$ mile, and Circling Cat D visibility $\frac{1}{2}$ mile.

MISSED APPROACH: Climb to

2500 direct YEBUG and hold.

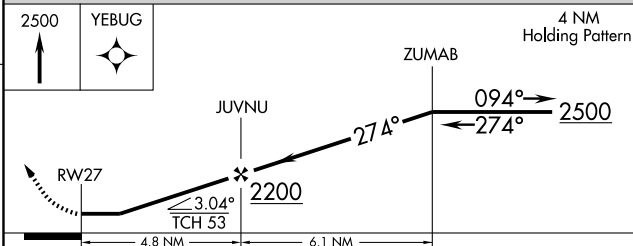
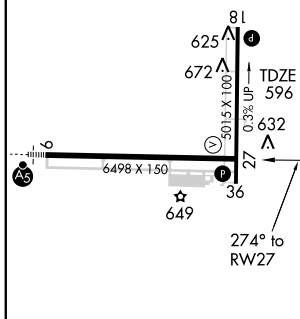
AWOS-3
121,425

MINNEAPOLIS CENTER
127.65

UNICOM
122.8 (CTAF) **L**

EC-1. 17 DEC 2009 to 14 JAN 2010

CAUTION:
Magnetic disturbances of
as much as 14° exist at
ground level at Escanaba.



CATEGORY	A	B	C	D
LNAV MDA	1040-1	444 (500-1)	1040-1¼ 444 (500-1¼)	1040-1½ 444 (500-1½)
CIRCLING	1060-1	451 (500-1)	1240-1¾ 631 (700-1¾)	1280-2¼ 671 (700-2¼)

HIRL Rwy 9-27 **L**

MIRL Rwy 18-36 L

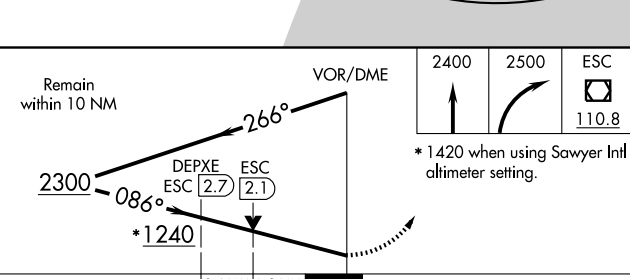
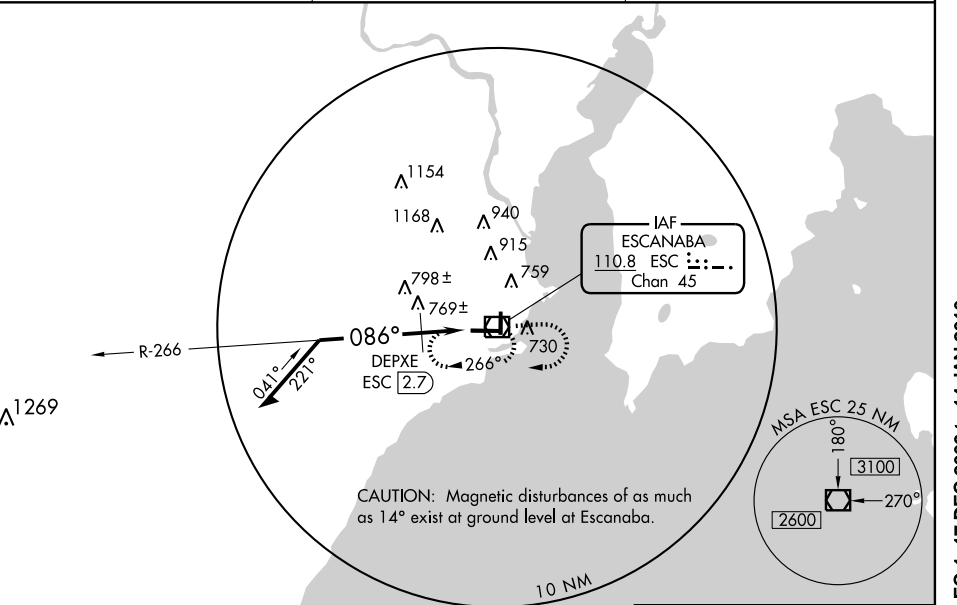
REIL Rwy 36 **L**

When local altimeter setting not received, use Sawyer Intl altimeter setting and increase all MDA 180 feet, increase S-9 Cat B visibility ¼ mile, Cats C and D visibility ¾ mile, Circling Cat B visibility ¼ mile, Cat C visibility ¾ mile, Cat D visibility ½ mile, increase DEPXE fix minimums S-9 Cats C and D visibility ½ mile, Circling Cat C visibility ¾ mile, Cat D visibility ½ mile. VDP NA when using Sawyer Intl altimeter setting.

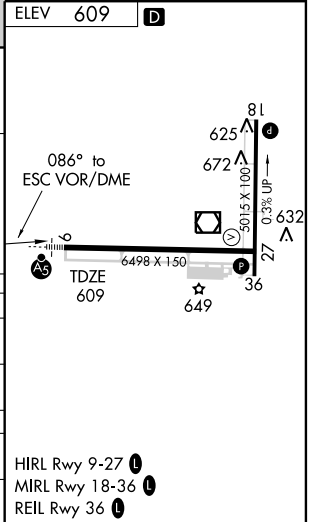
MALSRL

MISSED APPROACH:
Climb to 2400 then climbing right turn to 2500 direct ESC VOR/DME and hold.

AWOS-3 121.425	MINNEAPOLIS CENTER 127.65	UNICOM 122.8 (CTAF)
-------------------	------------------------------	------------------------



CATEGORY	A	B	C	D
S-9	1240-½ 631 (700-½)		1240-1¼ 631 (700-1¼)	1240-1½ 631 (700-1½)
CIRCLING	1240-1 631 (700-1)		1240-1¾ 631 (700-1¾)	1280-2¼ 671 (700-2¼)
DEPXE FIX MINIMUMS				
S-9	1040 - ½ 431 (500-½)		1040-¾ 431 (500-¾)	1040-1 431 (500-1)
CIRCLING	1060 - 1 451 (500-1)		1240-1¾ 631 (700-1¾)	1280-2¼ 671 (700-2¼)



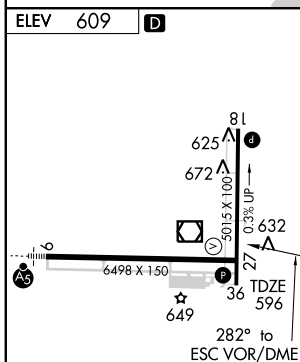
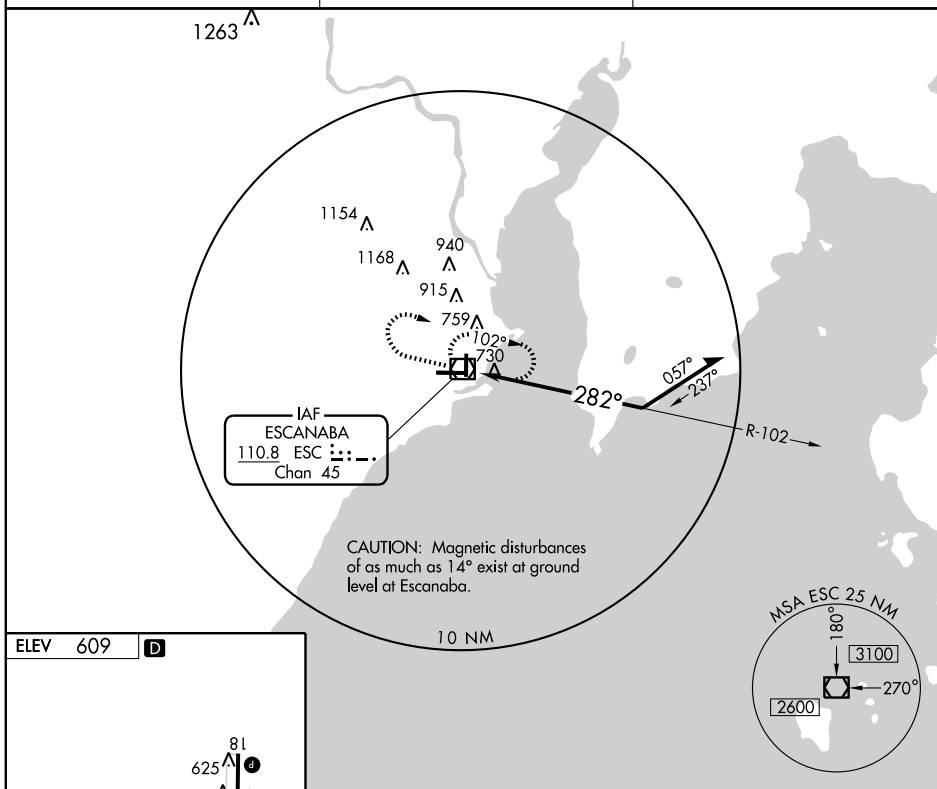
VOR/DME ESC 110.8 Chan 45	APP CRS 282°	Rwy Idg TDZE Apt Elev	6498 596 609
---	------------------------	-----------------------------	---



VOR RWY 27
ESCANABA / DELTA COUNTY (ESC)

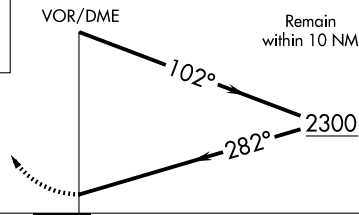
- Visibility reduction by helicopters NA.**
- When local altimeter setting not received, use Sawyer Intl altimeter setting and increase all MDA 180 feet, increase S-9 Cat C and D visibility ½ mile, Circling Cat C visibility ¾ mile, Cat D visibility ½ mile.**

MISSED APPROACH: Climb to 2400 then climbing right turn to 2500 direct ESC VOR/DME and hold.

AWOS-3 121.425	MINNEAPOLIS CENTER 127.65	UNICOM 122.8 (CTAF) 0
--------------------------	-------------------------------------	--



2400 ↑	2500 ↗	ESC  110.8	VOR/DME 	Remain within 10 NM
-----------	-----------	---	--	------------------------



CATEGORY	A	B	C	D
S-27	1080 - 1	484 (500-1)	1080 - 1¼ 484 (500-1¼)	1080 - 1½ 484 (500-1½)
CIRCLING	1080 - 1	471 (500-1)	1240-1¾ 631 (700-1¾)	1280-2¼ 671 (700-2¼)

HIRL Rwy 9-27 **L**
MIRL Rwy 18-36 **L**
REIL Rwy 36 **L**

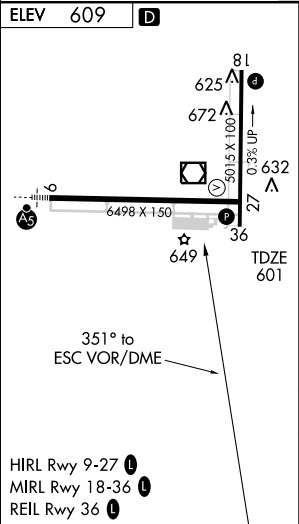
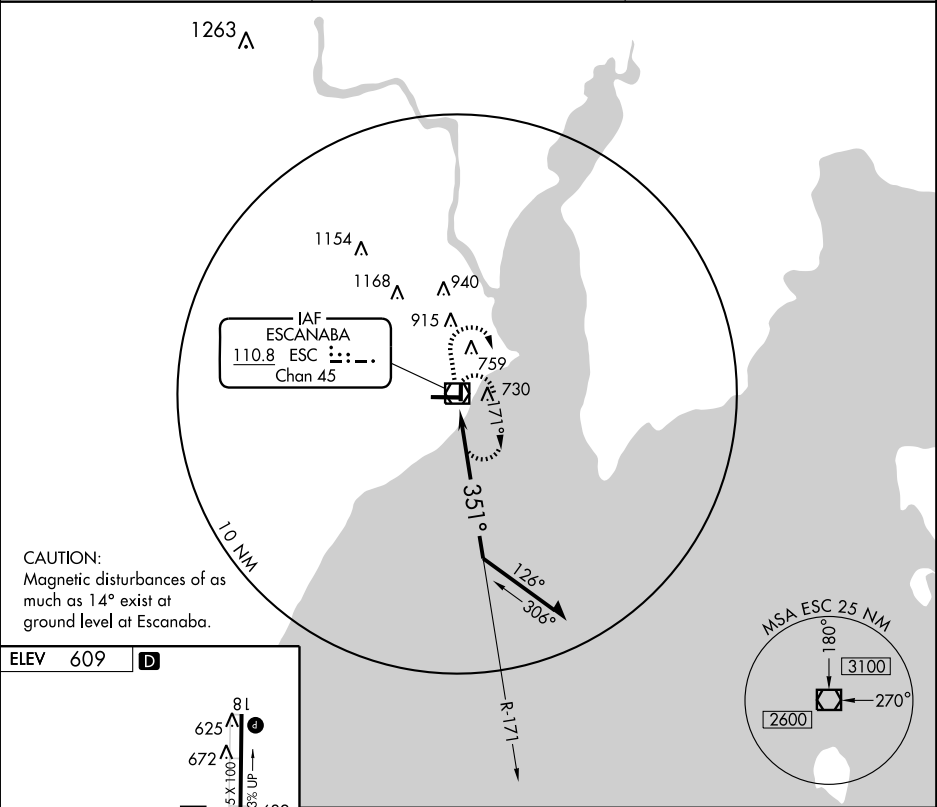
VOR RWY 36



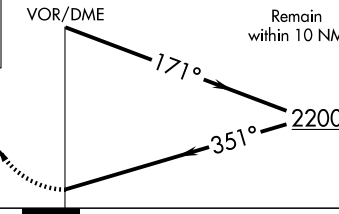
ESCANABA / DELTA COUNTY (ESC)

VOR/DME ESC	APP CRS	Rwy ldg TDZE	5015
110.8	351°	601	
Chan 45		Apt Elev	609

MISSED APPROACH: Climb to 2400, then right turn direct ESC VOR/DME and hold.

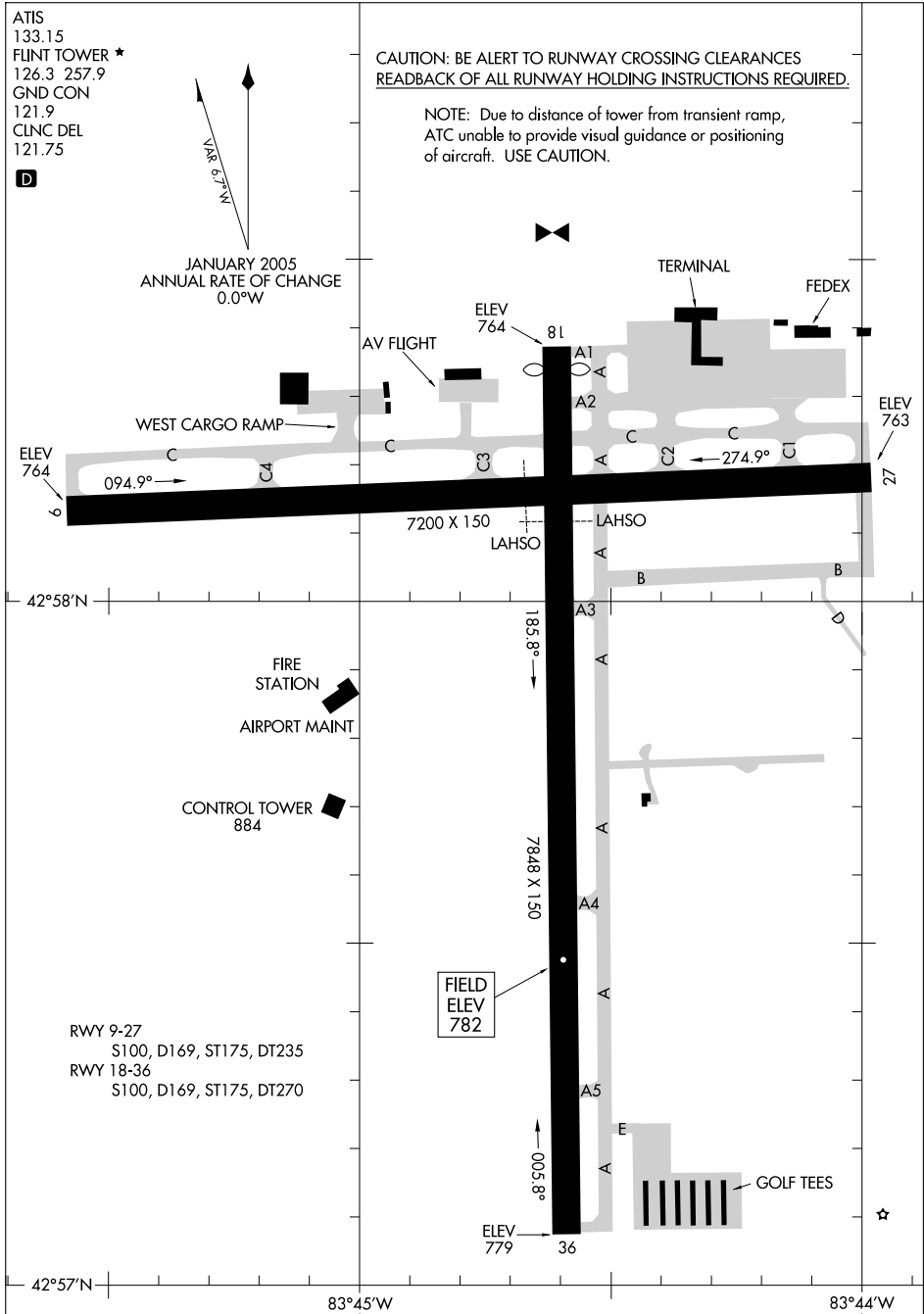
AWOS-3 121.425	MINNEAPOLIS CENTER 127.65	UNICOM 122.8 (CTAF) 0
-------------------	------------------------------	--------------------------



2400 ↑		ESC  110.8	<p>VOR/DME</p> <p>Remain within 10 NM</p> <p>171°</p> <p>351°</p> <p>2200</p> 	
CATEGORY	A	B	C	D
S-36	1080-1 479 (500-1)		1080-1¼ 479 (500-1¼)	1080-1½ 479 (500-1½)
CIRCLING	1080-1 471 (500-1)	1100-1 491 (500-1)	1240-1¼ 631 (700-1¼)	1280-2¼ 671 (700-2¼)

AIRPORT DIAGRAM

AL-618 (FAA)

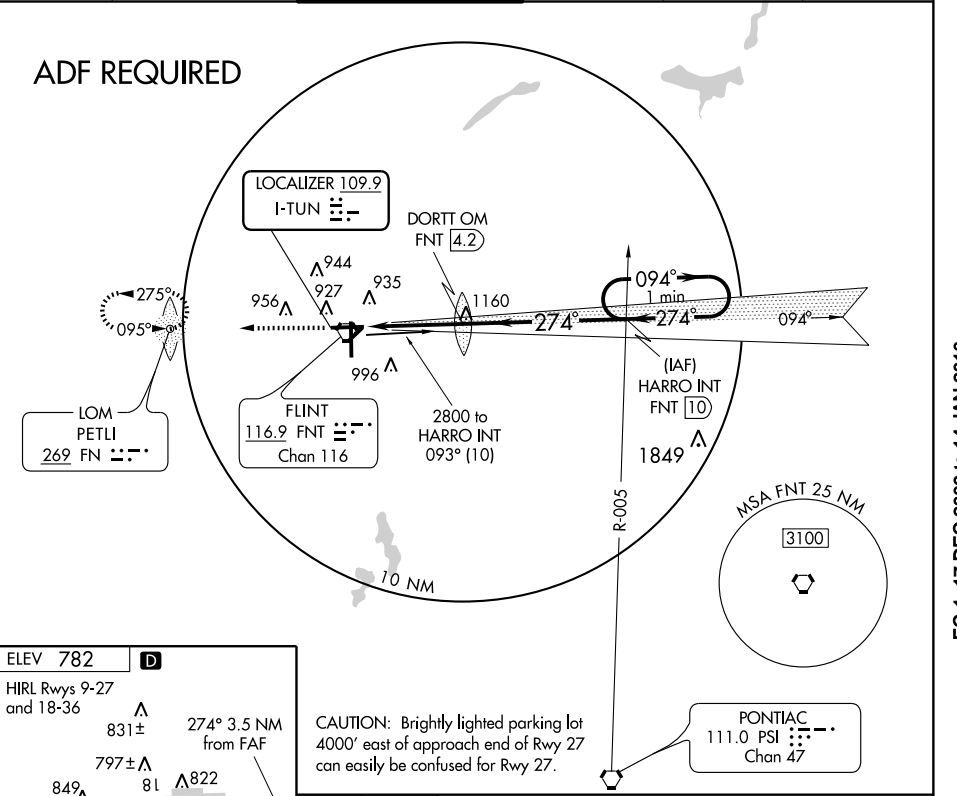
 FLINT / BISHOP INTL (FNT)
 FLINT, MICHIGAN


ASR

MALS R

MISSED APPROACH: Climb to 2800 direct FN LOM and hold.

ATIS 133.15	FLINT APP CON ★ 118.8 257.9	FLINT TOWER ★ 126.3 (CTAF) 257.9	GND CON 121.9	CLNC DEL 121.75	UNICOM 122.95
----------------	--------------------------------	-------------------------------------	------------------	--------------------	------------------



ELEV 782

HIRL Rwy 9-27 and 18-36

831±

797±

849

81

822

274° 3.5 NM from FAF

7200 X 150

799

884

7848 X 150

856±

821±

36

770

TDZE

2800

FN

269

DORTT OM FNT 4.2

HARRO INT FNT 10

One Minute Holding Pattern

094°

2800

274°

1960

2000*

2000

*LOC only

3.5 NM

5.8 NM

GS 3.00° TCH 57

CATEGORY	A	B	C	D
S-ILS 27	970-½ 200 (200-½)			
S-LOC 27	1260-½ 490 (500-½)		1260-¾ 490 (500-¾)	1260-1 490 (500-1)
CIRCLING	1280-1 498 (500-1)	1300-1 518 (600-1)	1300-1½ 518 (600-1½)	1340-2 558 (600-2)

FAF to MAP 3.5 NM

Knots	60	90	120	150	180
Min:Sec	3:30	2:20	1:45	1:24	1:10

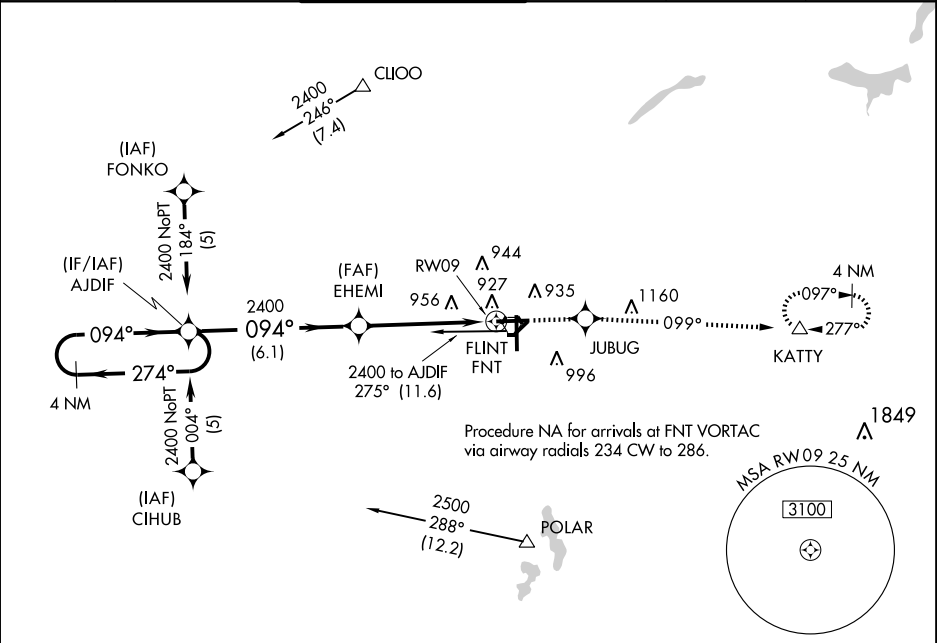
EC-1. 17 DEC 2009 to 14 JAN 2010

WAAS CH 45714 W09A	APP CRS 094°	Rwy Idg 7200 TDZE 771 Apt Elev 782
--	------------------------	---

RNAV (GPS) RWY 9
FLINT / BISHOP INTL (FNT)

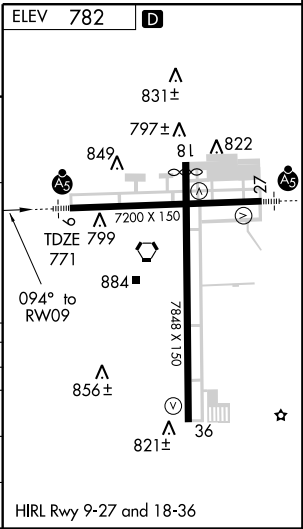
ASR	For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP -0.3 NA.	MALSR	MISSED APPROACH: Climb to 3000 direct JUBUG and via track 099° to KATTY and hold.
-----	--	-------	---

ATIS 133.15	FLINT APP CON ★ 118.8 257.9	FLINT TOWER ★ 126.3 (CTAF) 257.9	GND CON 121.9	CLNC DEL 121.75	UNICOM 122.95
-----------------------	---------------------------------------	--	-------------------------	---------------------------	-------------------------



CAUTION: Brightly lighted parking lot 4000' east of approach end of Rwy 27 can easily be confused for Rwy 27.

4 NM Holding Pattern				
AJDIF EHEMI				
2400 3000 JUBUG TRK 099° KATTY				
GS 3.00° TCH 50				
2400 094° 274° 094° 094°				
6.1 NM 3.5 NM 1.4 NM				
CATEGORY	A	B	C	D
LPV DA	971/24 200 (200-½)			
LNAV/VNAV DA	1227/50 456 (500-1)			
LNAV MDA	1260/24 489 (500-½)	1260/40 489 (500-¾)	1260/50 489 (500-1)	
CIRCLING	1300-1 518 (600-1)	1300-1½ 518 (600-1½)	1340-2 558 (600-2)	

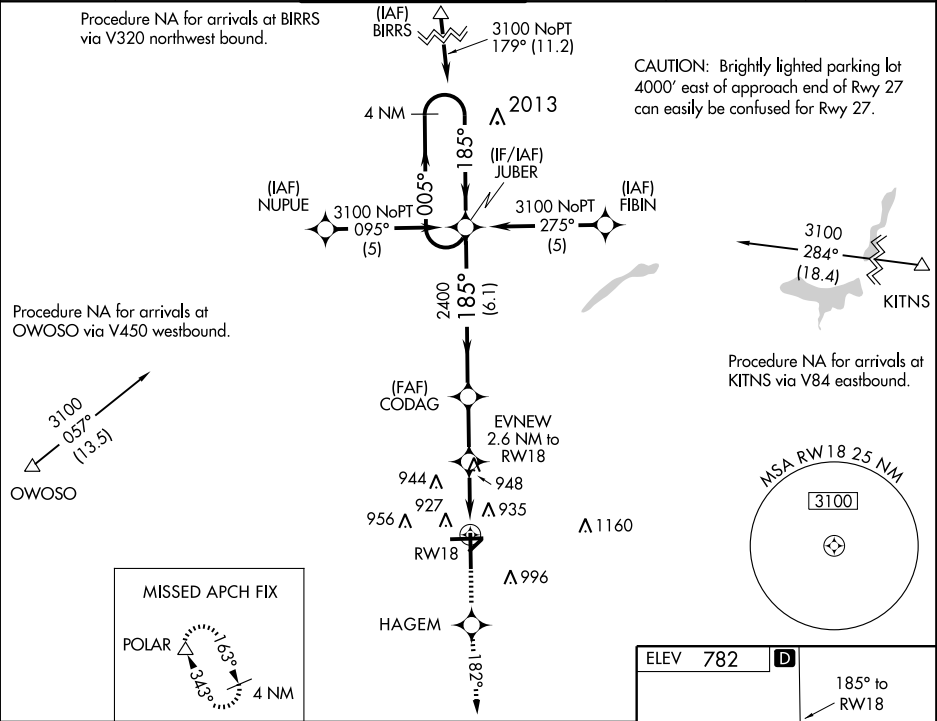


WAAS CH 99514 W18A	APP CRS 185°	Rwy Idg TDZE Apt Elev 7648 776 782
--	------------------------	--

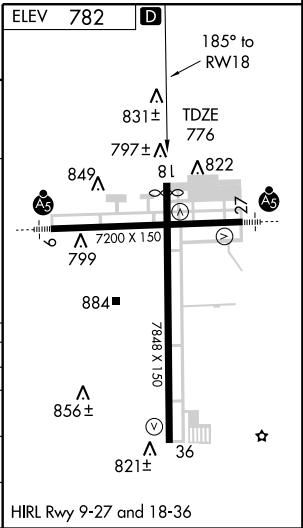
RNAV (GPS) RWY 18

FLINT / BISHOP INTL (FNT)

<div><div><div>T</div><div>ASR</div></div><div>For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.</div></div>	<div>MISSED APPROACH: Climb to 3000 direct HAGEM and via track 182° to POLAR and hold.</div>				
<div>ATIS</div> <div>133.15</div>	<div>FLINT APP CON ★</div> <div>118.8 257.9</div>	<div>FLINT TOWER ★</div> <div>126.3 (CTAF) 257.9</div>	<div>GND CON</div> <div>121.9</div>	<div>CLNC DEL</div> <div>121.75</div>	<div>UNICOM</div> <div>122.95</div>



CATEGORY		A	B	C	D
LPV DA		1109-1¼		333 (400-1¼)	
LNAV/VNAV DA		1253-1¾		477 (500-1¾)	
LNAV MDA		1200-1	424 (500-1)	1200-1 ¼	424 (500-1¼)
CIRCLING		1300-1	518 (600-1)	1300-1½	518 (600-1½)
				1340-2	558 (600-2)



▼

▲

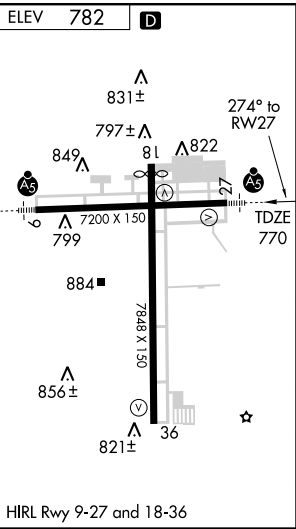
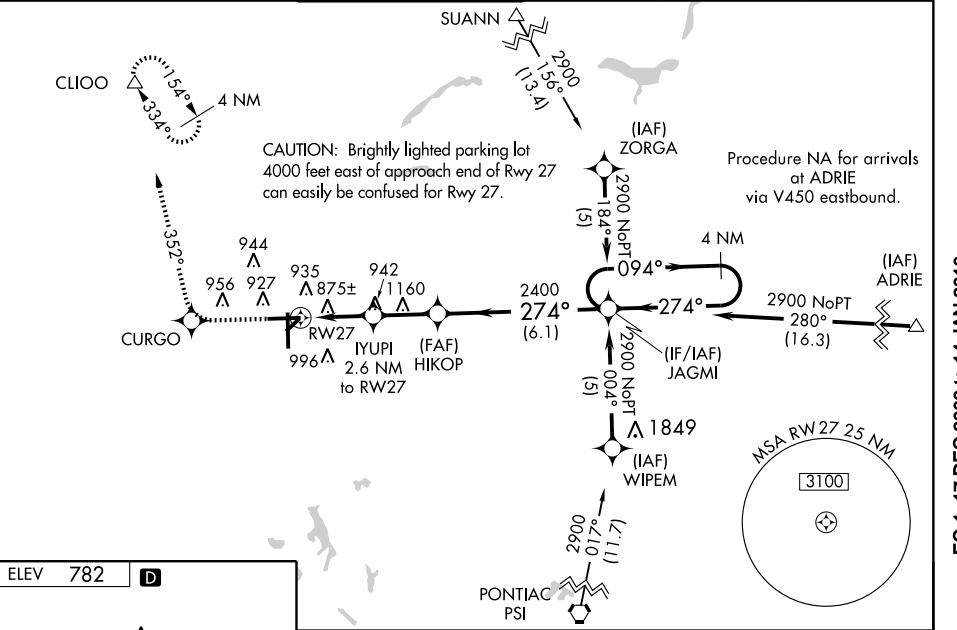
ASR

When local altimeter setting not received, use Owosso altimeter setting and increase all DA 47 feet, and all MDA 60 feet; and LNAV visibilities Cat C/D ¼ mile. VDP NA when using Owosso altimeter setting. Baro-VNAV NA when using Owosso altimeter setting.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). For inoperative MALSR, increase LPV all Cats visibility to 1¼. DME/DME RNP-0.3 NA.

MALSR

MISSED APPROACH:
Climb to 3000 direct CURGO and via 352° track to CLIOO and hold.

ATIS 133.15	FLINT APP CON ★ 118.8 257.9	FLINT TOWER ★ 126.3 (CTAF) 257.9	GND CON 121.9	CLNC DEL 121.75	UNICOM 122.95
----------------	--------------------------------	-------------------------------------	------------------	--------------------	------------------



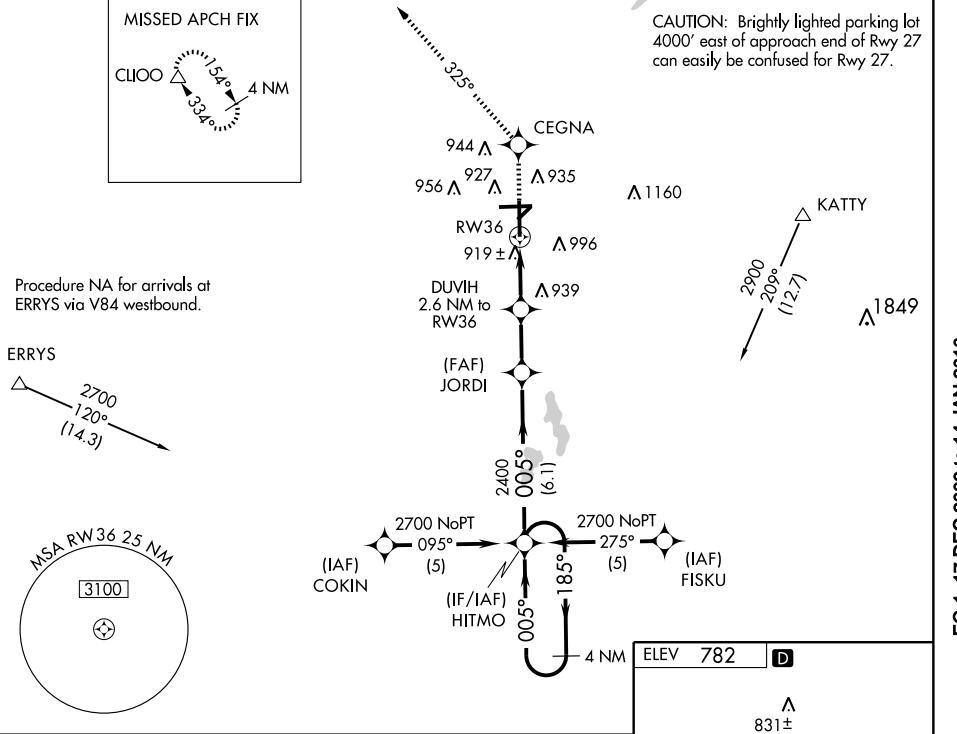
3000	CURGO	352° track	CLIOO	4 NM	JAGMI Holding Pattern
↑	✧		△		
* LNAV only					
RW27 1.4 NM to RW27 2.6 NM to RW27 1640* 2400 GS 3.00° TCH 56					
CATEGORY	A	B	C	D	
LPV DA	1098 - ¾ 328 (400-¾)				
LNAV/VNAV DA	1240 - 1¼ 470 (500-1¼)				
LNAV MDA	1260 - ½	490 (500-½)	1260 - ¾ 490 (500-¾)	1260 - 1 490 (500-1)	
CIRCLING	1260 - 1 478 (500-1)	1300 - 1 518 (600-1)	1300 - 1½ 518 (600-1½)	1340 - 2 558 (600-2)	

⚠

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below ASR -16°C (4°F) or above 47°C (116°F).
DME/DME RNP -0.3 NA. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 3000 direct CEGNA and via track 325° to CLIOO and hold.

ATIS 133.15	FLINT APP CON ★ 118.8 257.9	FLINT TOWER ★ 126.3 (CTAF) 257.9	GND CON 121.9	CLNC DEL 121.75	UNICOM 122.95
-----------------------	---------------------------------------	--	-------------------------	---------------------------	-------------------------



VORTAC FNT
116.9
Chan **116**

APP CRS
102°

Rwy Idg	7200
TDZE	771
Apt Elev	782

VOR RWY 9
FUNT / BISHOP INTL (FNT)



MALSR



MISSED APPROACH: Climb to 3000 via FNT R-097 to KATTY INT/FNT 10.3 DME and hold.

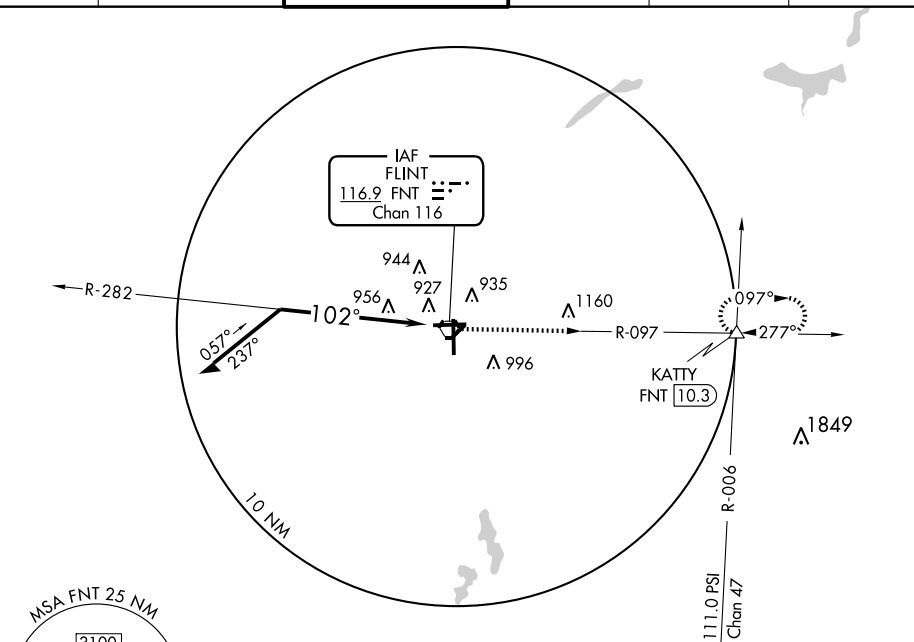
ATIS
133.15

FLINT APP CON ★
118.8 257.9

FLINT TOWER ★
126.3 (CTAF) **L** 257.9

GND CON
121.9

CLNC DE
121.75

UNICOM
122.95

CAUTION: Brightly lighted parking lot 4000' east of approach end of Rwy 27 can easily be confused for Rwy 27.

Remain
within 10 NM

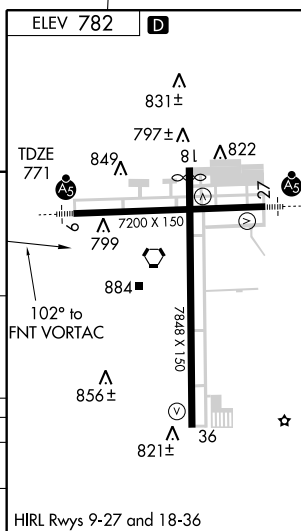
VORTAC

2200

3000
↑
FNT R-097
116.9

KATTY
△

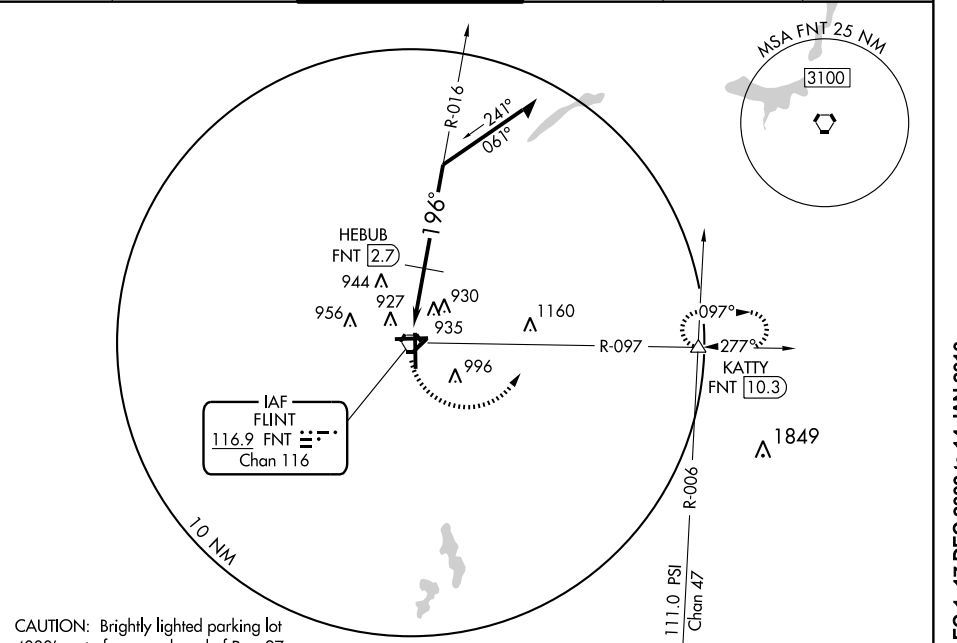
CATEGORY	A	B	C	D
S-9	1300/24 529 (500-½)		1300/50 529 (600-1)	1300/60 529 (600-1¼)
CIRCLING	1300-1 518 (600-1)		1300-1½ 518 (600-1½)	1340-2 558 (600-2)



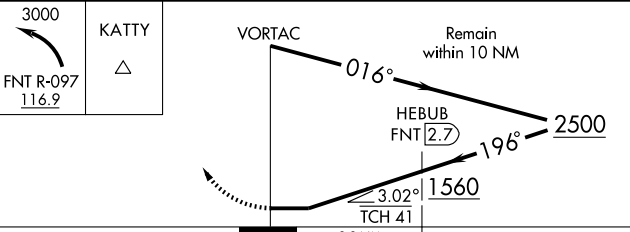
ASR

MISSED APPROACH: Climbing left turn to 3000
via FNT R-097 to KATTY INT and hold.

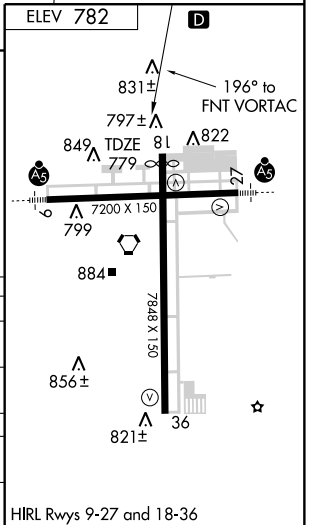
ATIS 133.15	FLINT APP CON ★ 118.8 257.9	FLINT TOWER ★ 126.3 (CTAF) 257.9	GND CON 121.9	CLNC DEL 121.75	UNICOM 122.95
----------------	--------------------------------	-------------------------------------	------------------	--------------------	------------------



CAUTION: Brightly lighted parking lot 4000' east of approach end of Rwy 27 can easily be confused for Rwy 27.



CATEGORY	A	B	C	D
S-18	1560 - 1 781 (800-1)	1560 - 1¼ 781 (800-1¼)	1560 - 2¼ 781 (800-2¼)	1560 - 2½ 781 (800-2½)
CIRCLING	1560 - 1 778 (800-1)	1560 - 1¼ 778 (800-1¼)	1560 - 2¼ 778 (800-2¼)	1560 - 2½ 778 (800-2½)
DME MINIMUMS				
S-18	1300 - 1 523 (600-1)	1300-1½ 523 (600-1½)	1300-1¾ 523 (600-1¾)	
CIRCLING	1300 - 1 518 (600-1)	1300 - 1 518 (600-1)	1300-1½ 518 (600-1½)	1340-2 558 (600-2)



▼

ASR

MALS R

AS

MISSED APPROACH: Climbing right turn to 3000 via FNT R-334 to CLIOO INT and hold.

ATIS	FLINT APP CON ★	FLINT TOWER ★	GND CON	CLNC DEL	UNICOM
133.15	118.8 257.9	126.3 (CTAF) 257.9	121.9	121.75	122.95

ELEV 782

D

3000

CLIOO

FNT R-334 116.9

VORTAC

087°

Remain within 10 NM

JOBGO FNT 2.8

267° 2500

1500

2.97°

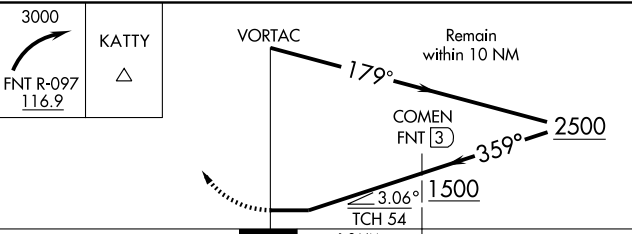
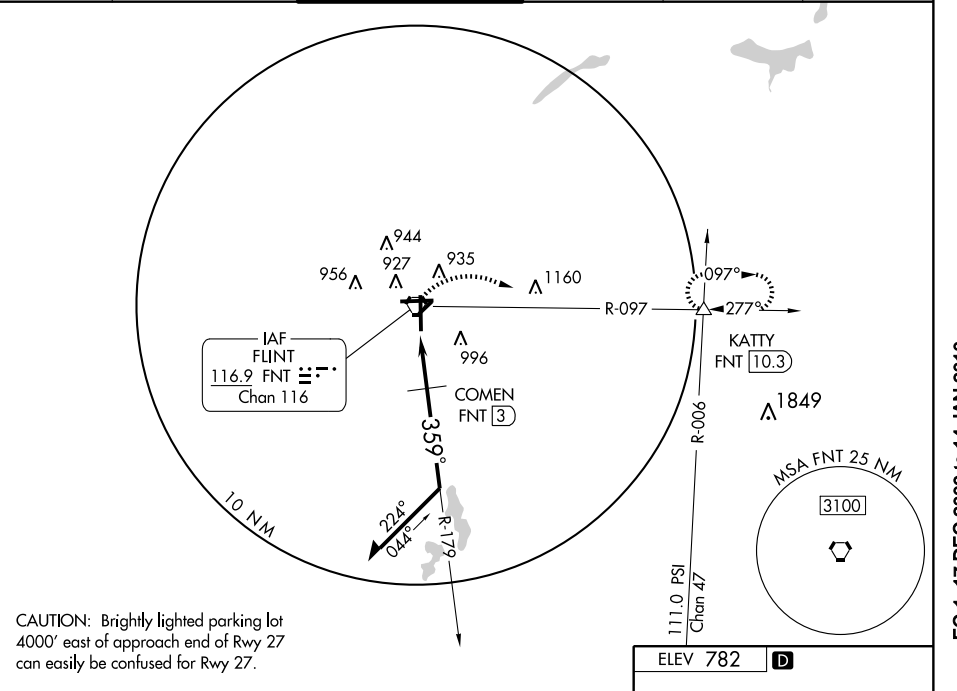
TCH 56

2.2 NM

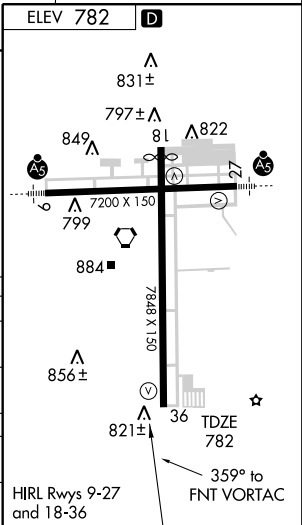
CATEGORY	A	B	C	D
S-27	1500 - ½	730 (800-½)	1500 - 1½ 730 (800-1½)	1500 - 1¾ 730 (800-1¾)
CIRCLING	1500 - 1	718 (800-1)	1500 - 2 718 (800-2)	1500 - 2½ 718 (800-2½)
DME MINIMUMS				
S-27	1260 - ½	490 (500-½)	1260 - ¾ 490 (500-¾)	1260 - 1 490 (500-1)
CIRCLING	1280 - 1 498 (500-1)	1300 - 1 518 (600-1)	1300 - 1½ 518 (600-1½)	1340 - 2 558 (600-2)

EC-1.17 DEC 2009 to 14 JAN 2010

V ASR		MISSED APPROACH: Climbing right turn to 3000 via FNT R-097 to KATTY INT/10.3 DME and hold.			
ATIS 133.15	FLINT APP CON ★ 118.8 257.9	FLINT TOWER ★ 126.3 (CTAF) 257.9	GND CON 121.9	CLNC DEL 121.75	UNICOM 122.95



CATEGORY	A	B	C	D
S-36	1500 - 1	718 (800-1)	1500 - 2 718 (800-2)	1500 - 2 1/4 718 (800-2 1/4)
CIRCLING	1500 - 1	718 (800-1)	1500 - 2 718 (800-2)	1500 - 2 1/4 718 (800-2 1/4)
DME MINIMUMS				
S-36	1200 - 1	418 (500-1)	1200 - 1 1/4	418 (500-1 1/4)
CIRCLING	1280 - 1 498 (500-1)	1300 - 1 518 (600-1)	1300 - 1 1/2 518 (600-1 1/2)	1340-2 558 (600-2)



APP CRS	Rwy Idg	2956
128°	TDZE	623
	Apt Elev	633

RNAV (GPS) RWY 15

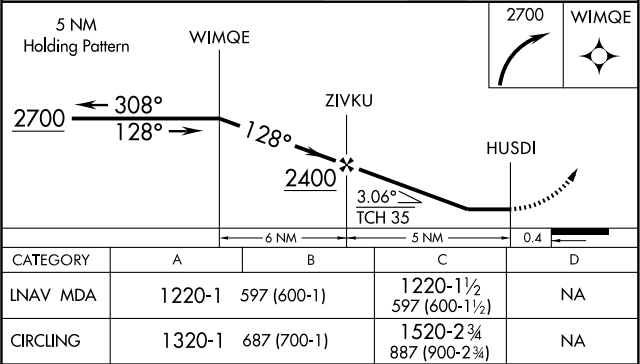
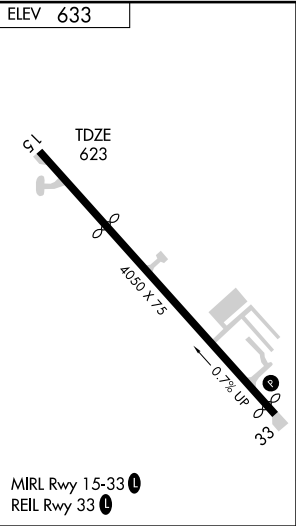
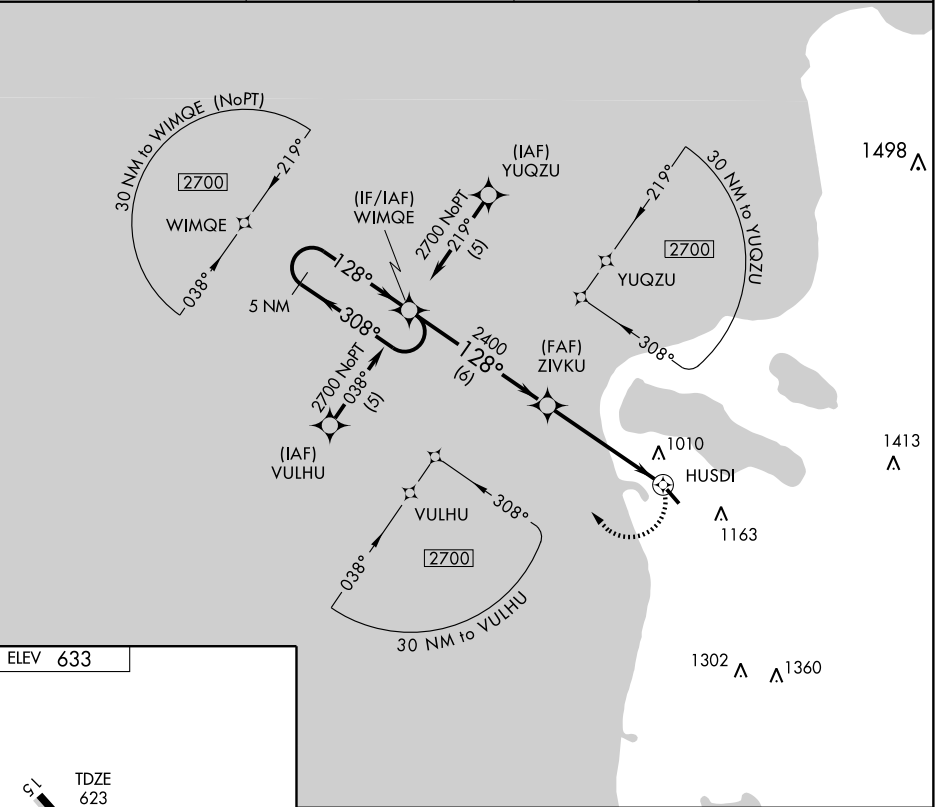
FRANKFORT DOW MEMORIAL FIELD (F'KS)

▼ If local altimeter setting not received, use Manistee altimeter setting and increase all MDA's 60 feet. Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA.

▲

MISSED APPROACH: Climbing right turn to 2700 direct WIMQE and hold.

AWOS-3 118.325	MINNEAPOLIS CENTER 132.9 338.3	GCO 121.725	UNICOM 123.05 (CTAF) 0
-------------------	-----------------------------------	----------------	----------------------------------



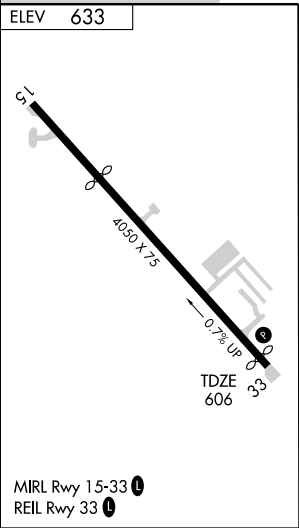
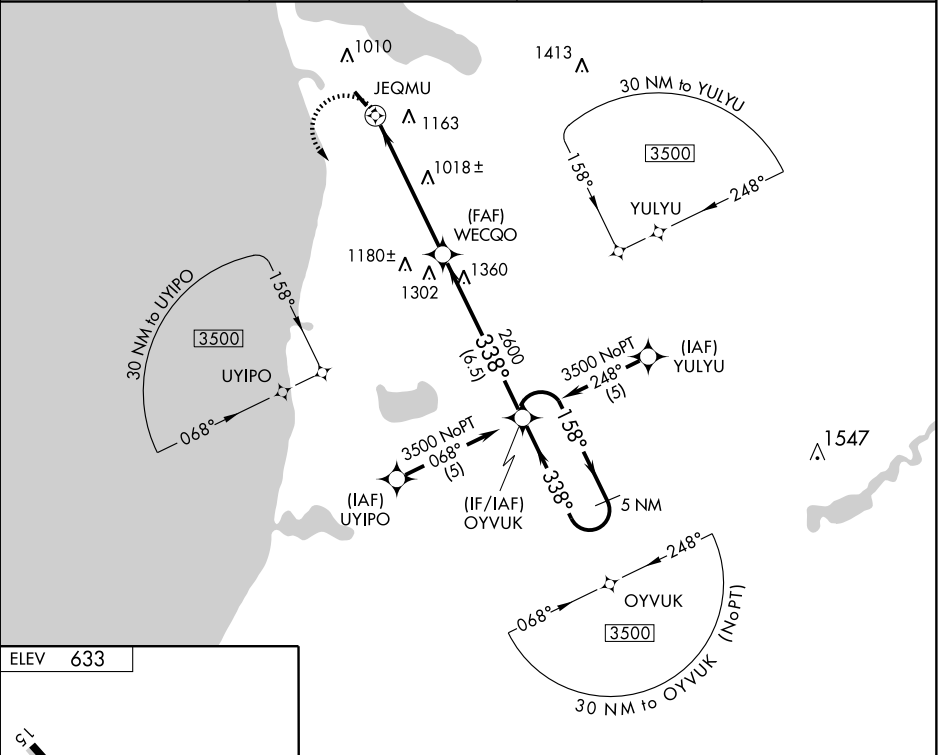
APP CRS	Rwy Idg	3939
338°	TDZE	606
	Apt Elev	633

RNAV (GPS) RWY 33

FRANKFORT DOW MEMORIAL FIELD (F'KS)

<p>▼ DME/DME RNP-0.3 NA. If local altimeter setting not received, use Manistee altimeter setting and increase all MDA's 60 feet.</p> <p>▲ Visibility reduction by helicopters NA.</p>	MISSED APPROACH: Climbing left turn to 3500 direct OYVUK and hold.
---	--

AWOS-3 118.325	MINNEAPOLIS CENTER 132.9 338.3	GCO 121.725	UNICOM 123.05 (CTAF) 0
-------------------	-----------------------------------	----------------	---------------------------



3500

OYVUK

5 NM Holding Pattern

158°

338°

3500

JEQMU

WECGO

OYVUK

338°

2600

158°

338°

3500

3.09°

TCH 35

0.5

5.5 NM

6.5 NM

CATEGORY	A	B	C	D
LNAV MDA	1320-1	714 (800-1)	1320-2 714 (700-2)	NA
CIRCLING	1320-1	687 (700-1)	1520-2 3/4 887 (900-2 3/4)	NA

ELEV 633

011° 4.8 NM from FAF

MIRL Rwy 15-33 **0**
REIL Rwy 33 **0**

CATEGORY	A	B	C	D
CIRCLING	1480-1 847 (900-1)	1480-1¼ 847 (900-1¼)	1520-2¾ 887 (900-2¾)	NA

WAAS
Chan **82405**
W18A

APP CRS
184°

Rwy Idg	6498
TDZE	770
Apt Elev	772

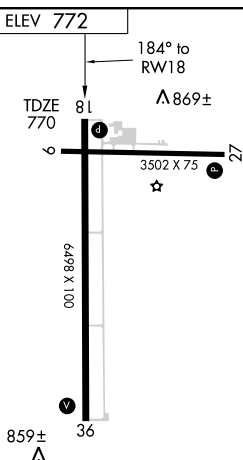
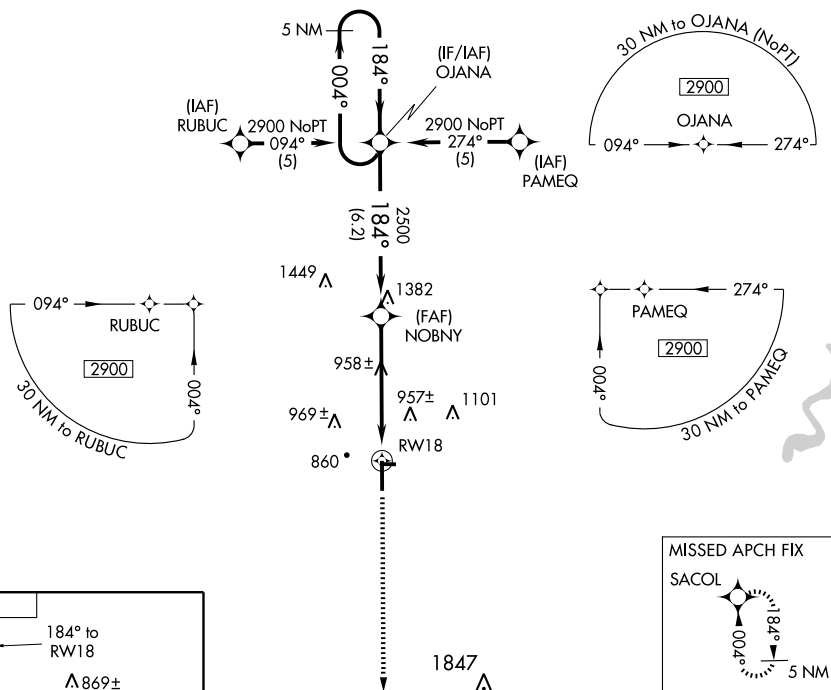
RNAV (GPS) RWY 18

When local altimeter setting not received, use Muskegon altimeter setting and increase all DA 65 feet, and all visibilities $\frac{1}{4}$ mile, increase all MDA 80 feet, and Cat C/D visibilities $\frac{1}{4}$ mile. VDP NA when using Muskegon altimeter setting. Baro-VNAV NA when using Muskegon altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

MISSED APPROACH:
Climb to 2900 direct
SACOL and hold.

AWOS-3
118.775

MUSKEGON APP CON ★
119.8 339.1

CLNC DEL
118.25UNICOM
123.0 (CTAF) **L**

REIL Rwy 18 and 36 **L**
MIRL Rwy 9-27 and 18-36 **L**

CATEGORY	A	B	C	D
LPV DA	1075-1 305 (400-1)			
LNAV/VNAV DA	1169-1½ 399 (400-1½)			
LNAV MDA	1220-1 450 (500-1)	1220-1¼ 450 (500-1¼)		1220-1½ 450 (500-1½)
CIRCLING	1260-1 488 (500-1)	1260-1½ 488 (500-1½)		1340-2 568 (600-2)

WAAS Chan 56505 W36A	APP CRS 004°	Rwy Idg TDZE Apt Elev	6498 760 772
--	------------------------	-----------------------------	---

RNAV (GPS) RWY 36

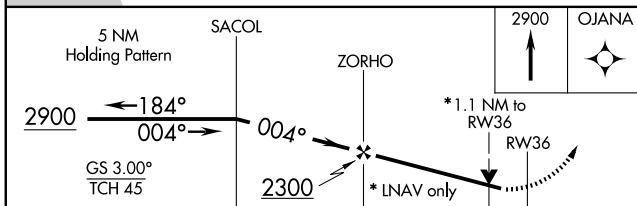
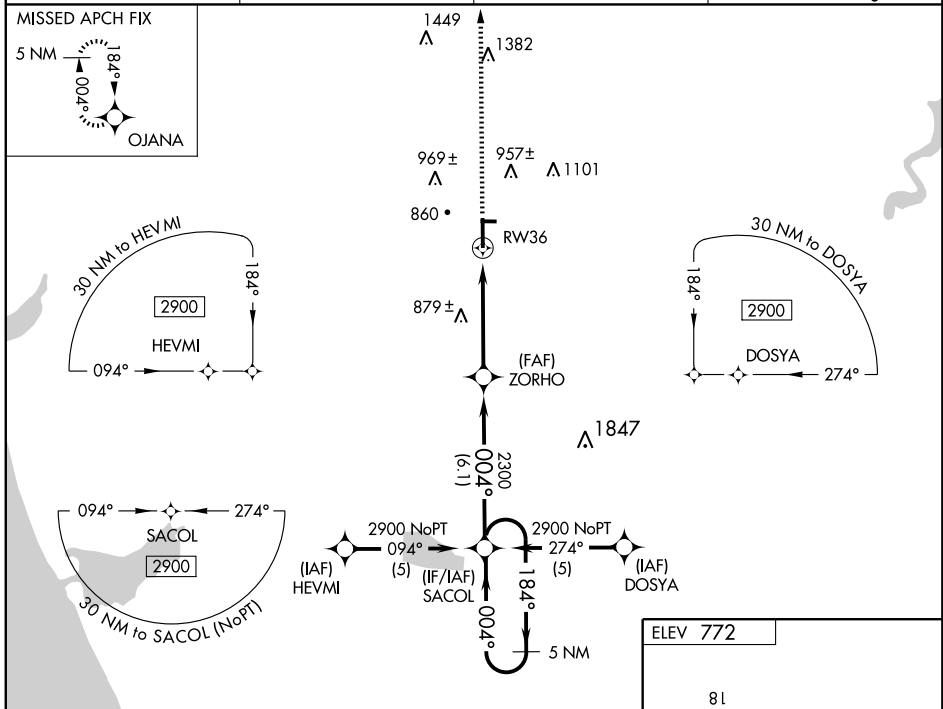
FREMONT MUNI (FFX)



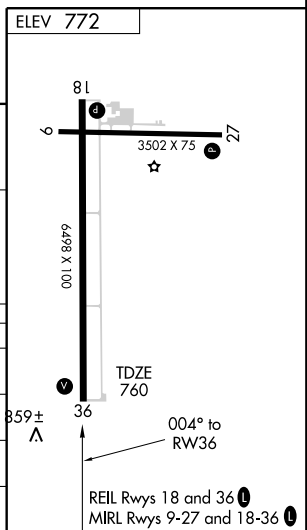
When local altimeter setting not received, use Muskegon altimeter setting and increase all DA 65 feet, and all visibilities ¼ mile, increase all MDA 80 feet, and Cat C/D visibilities ¼ mile. VDP NA when using Muskegon altimeter setting. Baro-VNAV NA when using Muskegon altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

MISSED APPROACH:
Climb to 2900 direct
OJANA and hold.

AWOS-3 118.775	MUSKEGON APP CON ★ 119.8 339.1	CLNC DEL 118.25	UNICOM 123.0 (CTAF) 0
--------------------------	--	---------------------------	---------------------------------

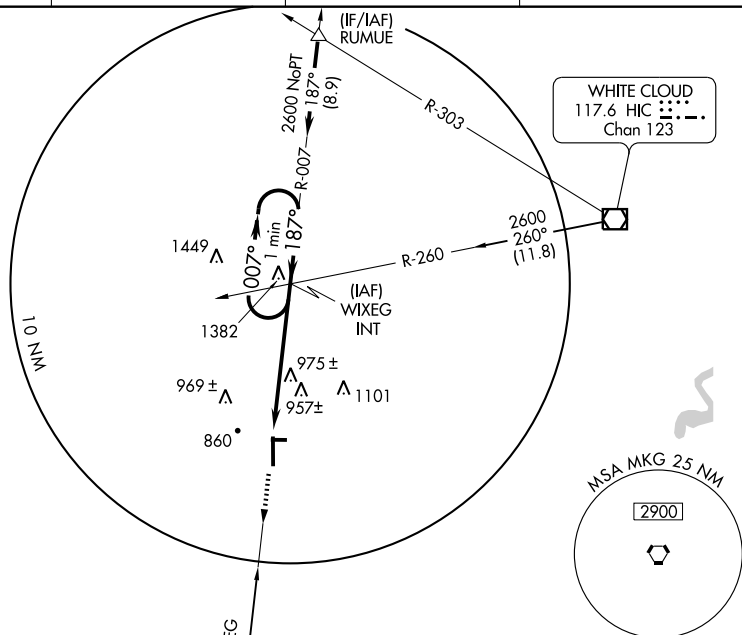




CATEGORY	A	B	C	D
LPV DA	1036-1 276 (300-1)			
LNAV/VNAV DA	1129-1¼ 369 (400-1¼)			
LNAV MDA	1140-1 380 (400-1)		1140-1¼ 380 (400-1¼)	
CIRCLING	1260-1 488 (500-1)	1260-1½ 488 (500-1½)	1340-2 568 (600-2)	




VOR RWY 18
FREMONT MUNI (FFX)

MISSED APPROACH: Climb to 2400 direct MKG VORTAC and hold.

UNICOM
123.0 (CTAF) **L**

MKG  115.2
Chan 99
R-188 

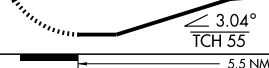
MUSKEGON
115.2 MKG 
Chan 99

2400	MKG
	
	<u>115.2</u>

WIXEG	One Minute Holding Pattern
-------	----------------------------

$$\frac{007^\circ \rightarrow}{1.070} 2600$$

VGSI and descent
angles not coincident.



ELEV 772

TDZE 770

187° 5.5 NM from FAF

81

27

3502 X 75

6498 X 100

36

359±

REIL Rwy 18 and 36

MIRL Rwy 9-27 and 18-36

FAF to MAP 5.5 NM

Knots	60	90	120	150	180
Min:Sec	5:30	3:40	2:45	2:12	1:50

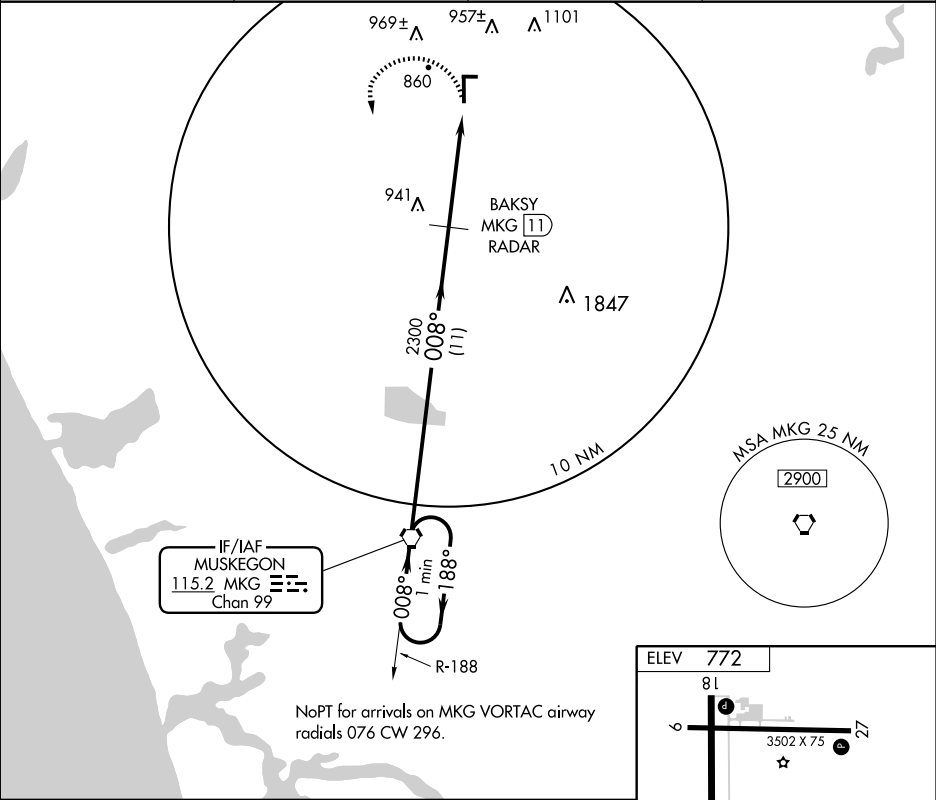
VORTAC MKG	APP CRS	Rwy Idg	6498
115.2	008°	TDZE	760
Chan 99		Apt Elev	772

VOR RWY 36
FREMONT MUNI (FFX)

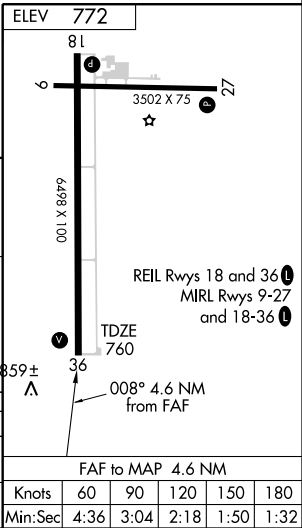
⚠ DME or RADAR required. Visibility reduction by helicopters NA. When local altimeter setting not received, use Muskegon altimeter setting and increase all S-36 MDA 80 feet, and Circling Cats A/B/C MDA 80 feet; increase S-36 Cat D visibility ¼ mile.
⚠ VDP NA when using Muskegon altimeter setting.



MISSED APPROACH: Climbing left turn to 2400 via MKG VORTAC R-355 to MKG VORTAC and hold.

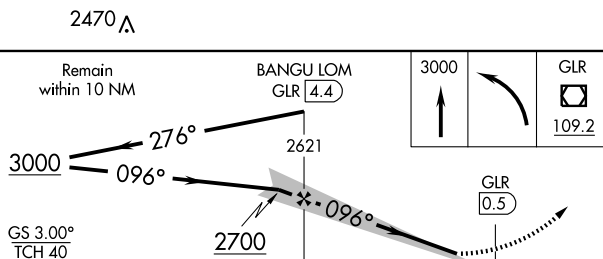
AWOS-3	MUSKEGON APP CON ★	CLNC DEL	UNICOM
118.775	119.8 339.1	118.25	123.0 (CTAF) 0



One Minute VORTAC Holding Pattern				
CATEGORY	A	B	C	D
S-36	1200-1 440 (500-1)		1200-1¼ 440 (500-1¼)	1200-1½ 440 (500-1½)
CIRCLING	1260-1 488 (500-1)		1260-1½ 488 (500-1½)	1340-2 568 (600-2)



			MISSED APPROACH: Climb to 3000 then left turn direct GLR VOR/DME and hold.
ASOS 118.375	MINNEAPOLIS CENTER 134.6 354.05		UNICOM 122.8 (CTAF) 0



ELEV 1328

TDZE 1319

1335± Δ 81

1404 \star

6578 X 150

3319 X 75

36

1341± Δ

096° 3.9 NM from FAF

REIL Rwy 27 \bullet

MIRL Rwy 18-36 \bullet

HIRL Rwy 9-27 \bullet

FAF to MAP 3.9 NM

Knots	60	90	120	150	180
Min:Sec	3:54	2:36	1:57	1:34	1:18

LOM GL <u>375</u>	APP CRS 096°	Rwy Idg 6578 TDZE 1319 Apt Elev 1328
-----------------------------	------------------------	---

NDB RWY 9
GAYLORD RGNL (GLR)



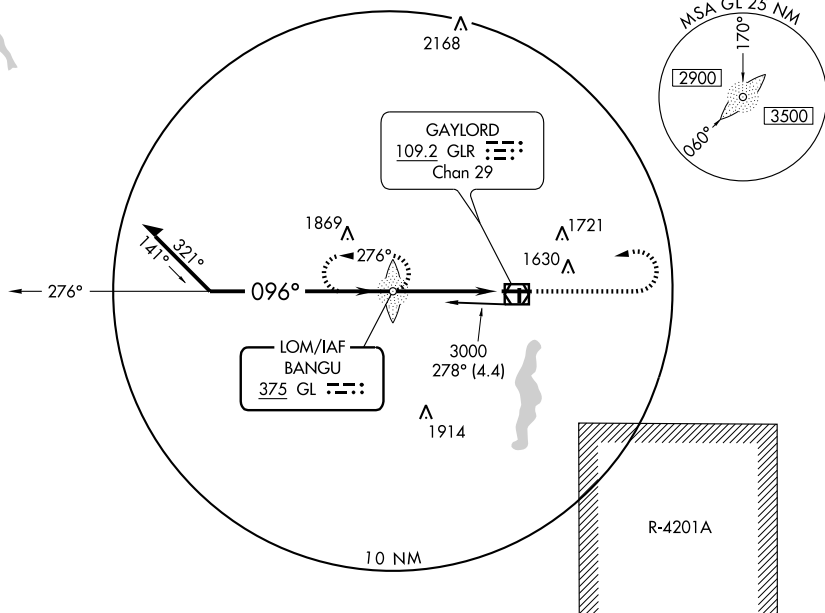
A NA

MALSR



MISSED APPROACH: Climb to 3000, then left turn direct GL LOM and hold.

ASOS 118,375	MINNEAPOLIS CENTER 134.6 354.05	UNICOM 122.8 (CTAF) 0
------------------------	---	---------------------------------



EC-1. 17 DEC 2009 to 14 JAN 2010

 Δ^{2470}

Remain
within 10 NM

LOM

3000

2400

— 3.9 NM —



A

[illegible]REIL Rwy 27

MIRL Rwy 18-36

HIRL Rwy 9-27

FAF to MAP 3.9 NM

CATEGORY	A	B	C	D	MIRL Rwy 18-36  HIRL Rwy 9-27 					
S-9	1780- $\frac{3}{4}$ 461 (500- $\frac{3}{4}$)			1780-1 $\frac{1}{4}$ 461 (500-1 $\frac{1}{4}$)	FAF to MAP 3.9 NM					
CIRCLING	1840-1 512 (600-1)	1940-1 612 (700-1)	1940-1 $\frac{3}{4}$ 612 (700-1 $\frac{3}{4}$)	2080-2 $\frac{1}{2}$ 752 (800-2 $\frac{1}{2}$)	Knots	60	90	120	150	180
					Min:Sec	3:54	2:36	1:57	1:34	1:18

AL-5373 (FAA)

VOR or GPS RWY 9
GAYLORD RGNL (GLR)

VOR/DME GLR 109.2 Chan 29	APP CRS 104°	Rwy Idg 6578 TDZE 1319 Apt Elev 1328
---	------------------------	---



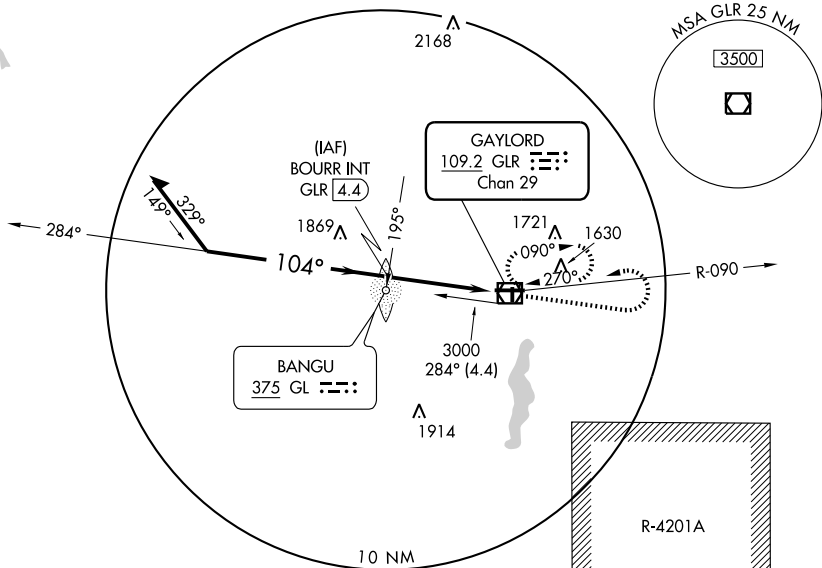
MALSR



MISSED APPROACH: Climb to 3000, then left turn direct GLR VOR/DME and hold.

ASOS
118.375

MINNEAPOLIS CENTER
134.6 354.05

UNICOM
122.8 (CTAF) **L**

ADF or DME REQUIRED

 Δ^{2470}

Remain
within 10 NM

BOURR INT
GIR 44

3000

GL

3000

 284°

2400

VOR/DME

– 3.8 NM –

CATEGORY

A

D

S-

1840-1
512 (600-1)

0-1/2

1940-1
612 (700-1)

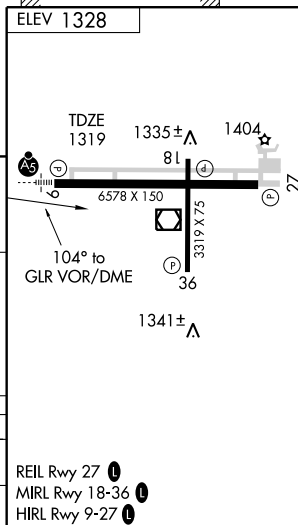
1940-1 $\frac{3}{4}$
612 (700-1 $\frac{3}{4}$)

17

2080-2½
52 (800-2½)

REIL Rwy 27 **L**

MIRL Rwy 18-36 L

HIRL Rwy 9-27 **L**

EC-1. 17 DEC 2009 to 14 JAN 2010

VOR/DME GLR	APP CRS	Rwy Idg	6578
109.2	270°	TDZE	1328
Chan 29		Apt Elev	1328

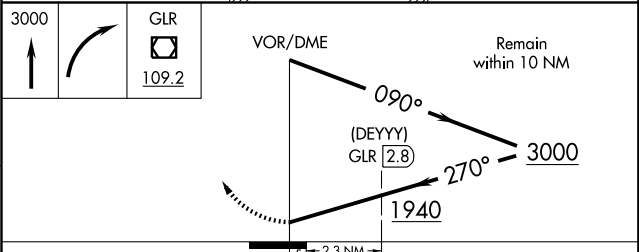
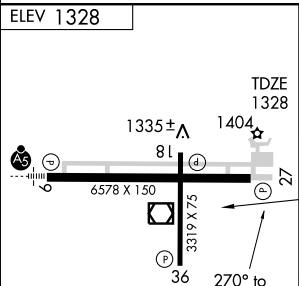
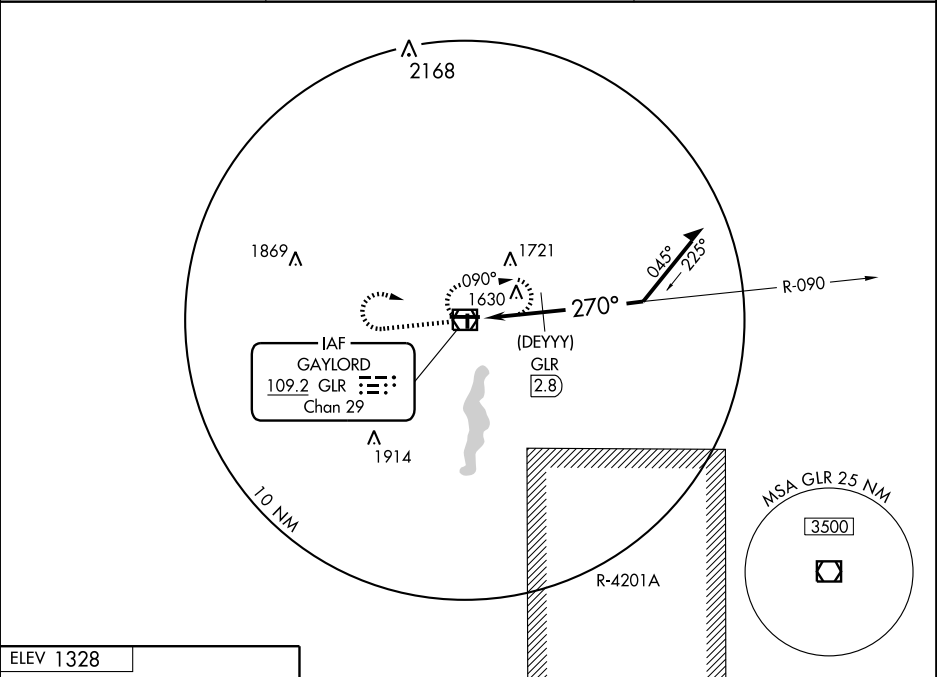
VOR or GPS RWY 27
GAYLORD RGNL (GLR)

▼

▲

MISSED APPROACH: Climb to 3000, then right turn direct GLR VOR/DME and hold.

ASOS 118.375	MINNEAPOLIS CENTER 134.6 354.05	UNICOM 122.8 (CTAF) 0
-----------------	------------------------------------	--------------------------



CATEGORY	A	B	C	D
S-27	1940-1	612 (700-1)	1940-1¾ 612 (700-1¾)	1940-2 612 (700-2)
CIRCLING	1940-1	612 (700-1)	1940-1¾ 612 (700-1¾)	2080-2½ 752 (800-2½)
DME MINIMUMS				
S-27	1880-1	552 (600-1)	1880-1½ 552 (600-1½)	1880-1¾ 552 (600-1¾)
CIRCLING	1880-1 552 (600-1)	1940-1 612 (700-1)	1940-1¾ 612 (700-1¾)	2080-2½ 752 (800-2½)

REIL Rwy 27 0
MIRL Rwy 18-36 0
HIRL Rwy 9-27 0

NDB GDW
209

APP CRS
265°

Rwy Idg	4700
TDZE	773
Apt Elev	776

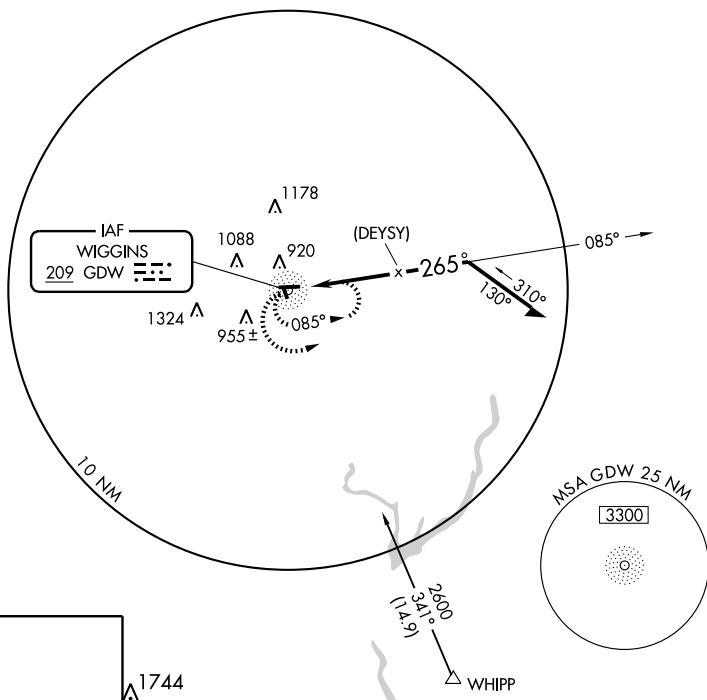
NDB or GPS RWY 27
GLADWIN ZETTEL MEMORIAL (GDW)



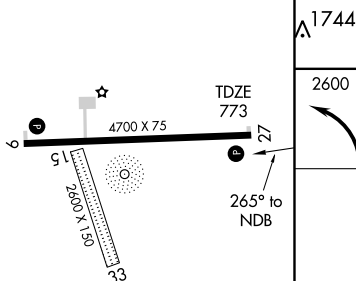
Use Saginaw, MI altimeter setting.

MISSED APPROACH: Climbing left turn to 2600 in GDW NDB holding pattern.

SAGINAW APP CON ★
126.45 236.625

UNICOM
122.8 (CTAF) **L**

ELEV 776



MIRL Rwy 9-27 **L**
REIL Rwy 9 and 27 **L**

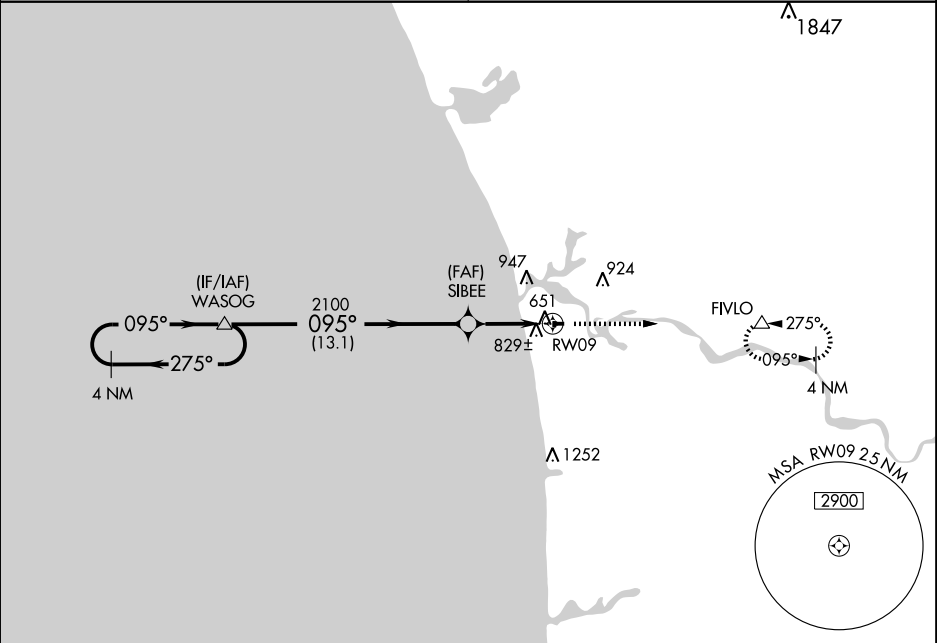
Knots	60	90	120	150	180
Min:Sec					

CATEGORY	A	B	C	D
S-27	1420-1	647 (700-1)	1420-1½ 647 (700-1½)	1420-2 647 (700-2)
CIRCLING	1440-1 664 (700-1)	1520-1¼ 744 (800-1¼)	1520-2¼ 744 (800-2¼)	1520-2½ 744 (800-2½)

APP CRS	Rwy Idg	3752
095°	TDZE	602
	Apt Elev	604

RNAV (GPS) RWY 9
GRAND HAVEN MEMORIAL AIRPARK (3GM)

<div><div>▽</div><div>▲ NA</div></div> <div>DME/DME RNP-0.3 NA. Use Muskegon altimeter setting. Circling NA at night to Rwys 18/36.</div>	MISSED APPROACH: Climb to 2700 direct FIVLO and hold.
MUSKEGON APP CON ★ 119.8 339.1	UNICOM 122.7 (CTAF) 0



4 NM Holding Pattern

WASOG

3000

← 275°

095° →

095°

2100

3.04°

TCH 35

13.1 NM

4.5 NM

SIBEE

2700

FIVLO

TDZE 602

81

3752 X 75

0.3% UP

27

095° to RWY 9

CATEGORY	A	B	C	D
LNAV MDA	1120-1	518 (600-1)	1120-1½ 518 (600-1½)	NA
CIRCLING	1160-1 556 (600-1)	1180-1 576 (600-1)	1180-1½ 576 (600-1½)	NA

ELEV 604

REIL Rwys 9 and 27 0

MIRL Rwys 9-27 and 18-36 0

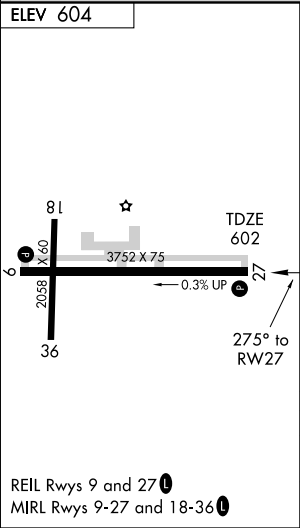
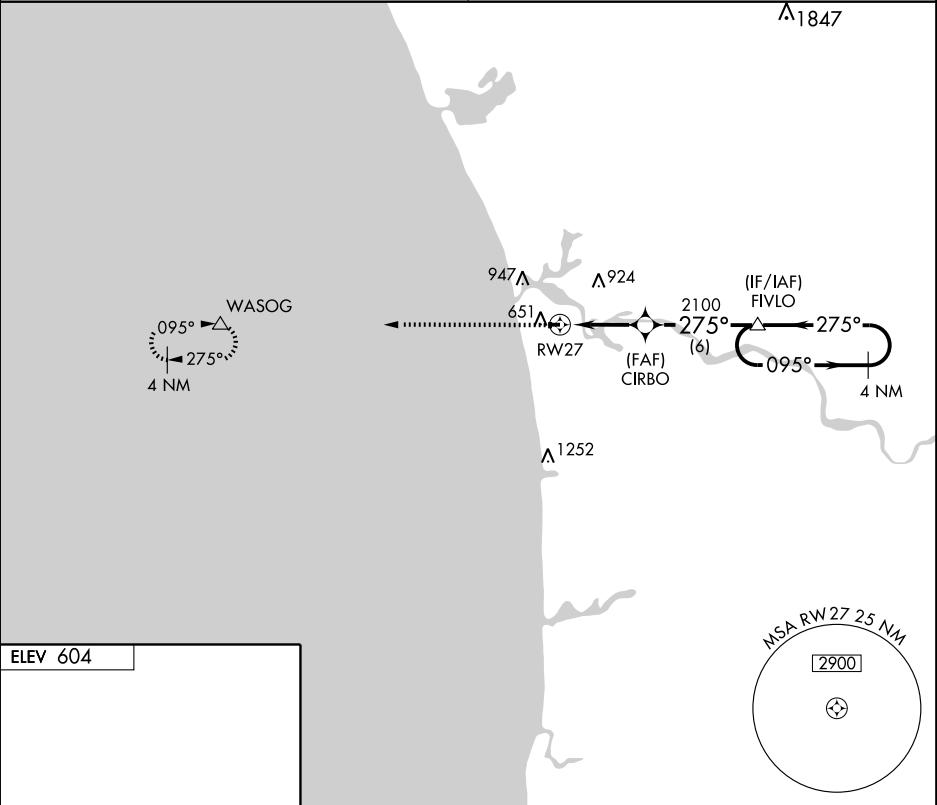
APP CRS	Rwy Idg	3752
275°	TDZE	602
	Apt Elev	604

RNAV(GPS) RWY 27

GRAND HAVEN MEMORIAL AIRPARK (3GM)

<div><div>▼</div><div>▲ NA</div></div> <div>DME/DME RNP-0.3 NA. Use Muskegon altimeter setting. Circling NA at night rwys 18/36.</div>	MISSED APPROACH: Climb to 3000 direct WASOG and hold.
--	---

MUSKEGON APP CON ★ 119.8 339.1	UNICOM 122.7 (CTAF) 0
-----------------------------------	--------------------------



3000	WASOG			
	△			
		CIRBO	FIVLO	4 NM Holding Pattern
				095° → 2700
				← 275°
				VGSI and descent angles not coincident.
CATEGORY	A	B	C	D
LNAV MDA	1000-1	398 (400-1)		NA
CIRCLING	1160-1 556 (600-1)	1180-1 576 (600-1)	1180-1½ 576 (600-1½)	NA

VORTAC MKG 115.2 Chan 99	APP CRS 222°	Rwy Idg TDZE Apt Elev N/A N/A 604
--	------------------------	---

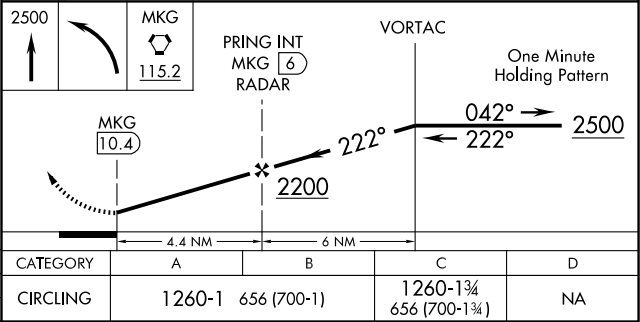
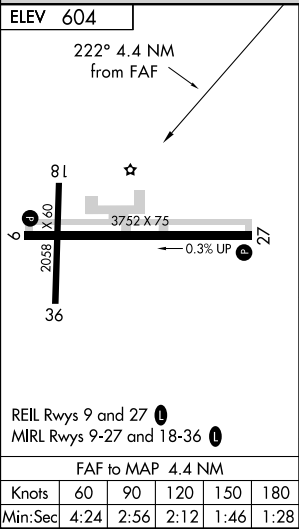
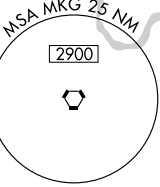
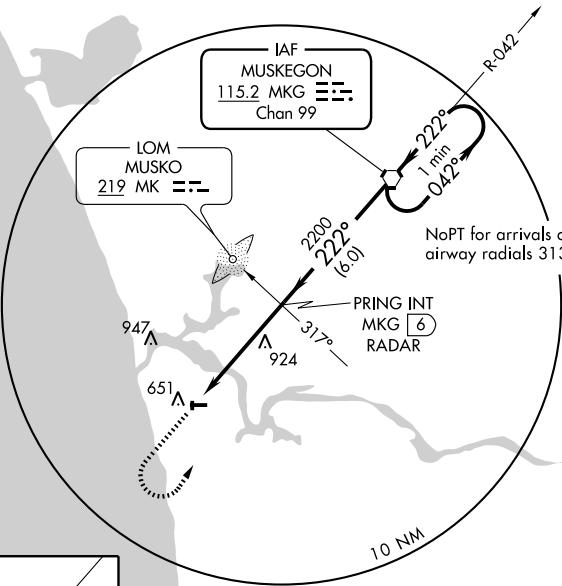
Use Muskegon altimeter setting.
ADF, DME or RADAR REQUIRED

MISSED APPROACH: Climb to 2500 then
left turn direct MKG VORTAC and hold.

MUSKEGON APP CON ★
119.8 339.1

UNICOM
122.7 (CTAF) 0

△ 1847



LAN VORTAC 110.8 Chan 45	APCH CRS 345°	Rwy Idg NA TDZE NA Arpt Elev 842
--	-------------------------	---

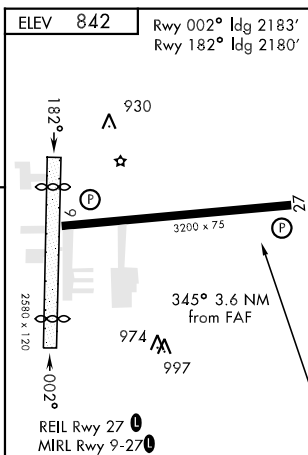
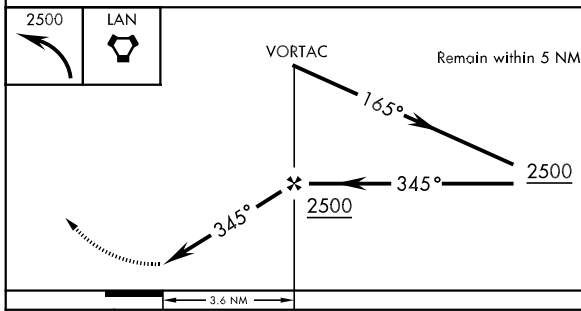
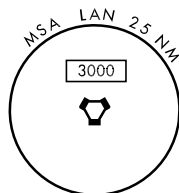
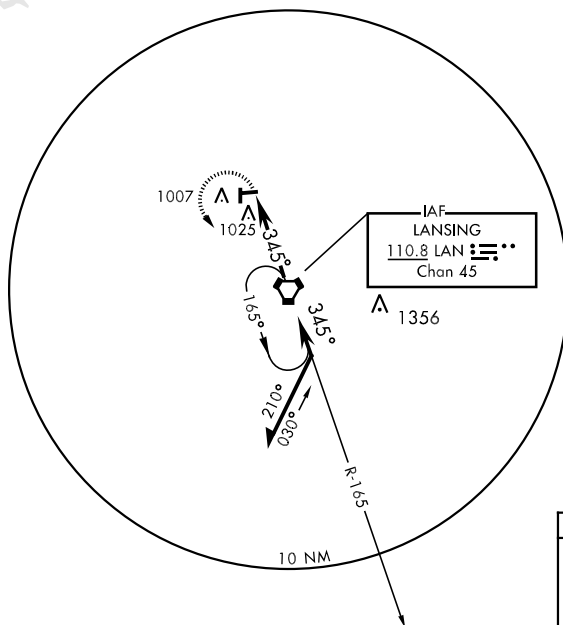
AL-6349 [USA]

GRAND LEDGE/ABRAMS MUNI (4D0)

A NA Use Lansing altimeter setting.

MISSED APPROACH: Climbing left turn to 2500 direct LAN VORTAC and hold.

	LANSING APP CON 118.65 226.4	UNICOM (NG OPS) 122.7 0	
--	--	-----------------------------------	--



CATEGORY	COPTER	Knots	45	60	75	90	105
H-345°	1360-½ 518 (600-½)	Min:Sec	4:48	3:36	2:51	2:24	2:03

GRAND LEDGE, MICHIGAN

42° 47'N-84° 44'W

GRAND LEDGE/ABRAMS MUNI (4D0)

Amdt 6 08185

CORTEX VOL 2 158

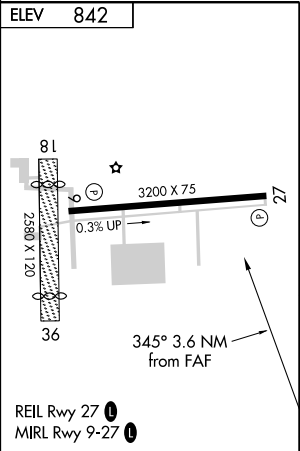
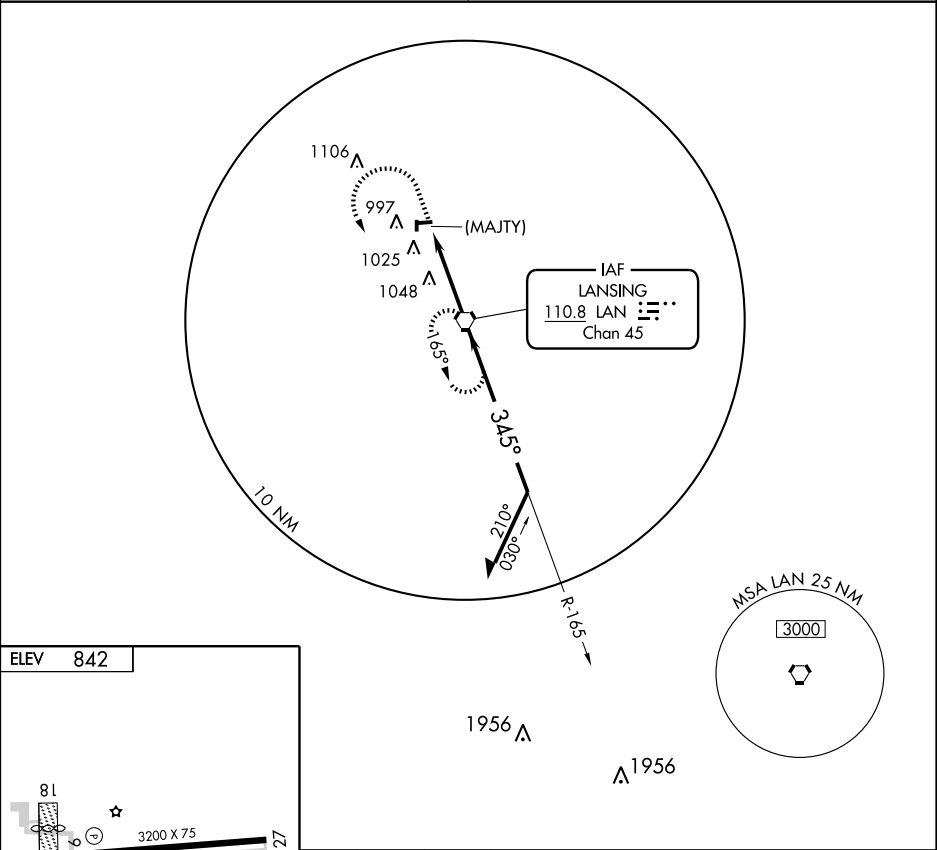
VOR or GPS-A

GRAND LEDGE / ABRAMS MUNI (4D0)

VORTAC LAN	APP CRS	Rwy Idg	N/A
110.8	345°	TDZE	N/A
Chan 45		Apt Elev	842

<div><div><div></div><div>NA</div></div></div> <div>Use Lansing altimeter setting.</div>	MISSED APPROACH: Climb to 2500, then turn left direct LAN VORTAC and hold.
--	--

LANSING APP CON 118.65 226.4	UNICOM 122.7 (CTAF)
---------------------------------	------------------------



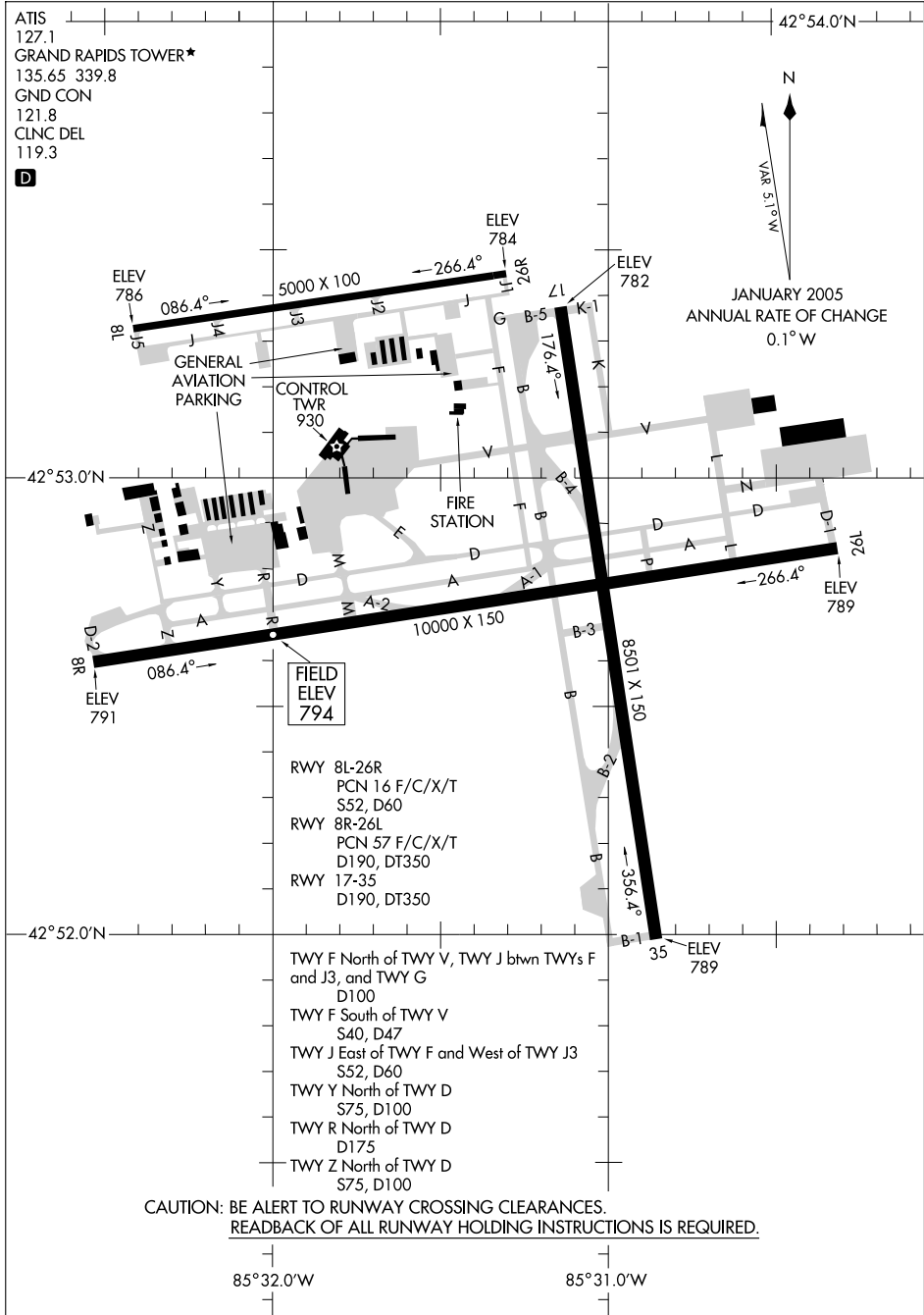
FAF to MAP 3.6 NM						CATEGORY	A	B	C	D
Knots	60	90	120	150	180	CIRCLING	1400-1	558 (600-1)	1400-1½ 558 (600-1½)	NA
Min:Sec	3:36	2:24	1:48	1:26	1:12					

AIRPORT DIAGRAM

AL-5184 (FAA)

GRAND RAPIDS / GERALD R. FORD INTL (GRR)

GRAND RAPIDS, MICHIGAN



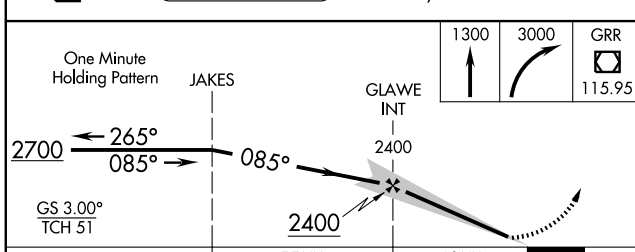
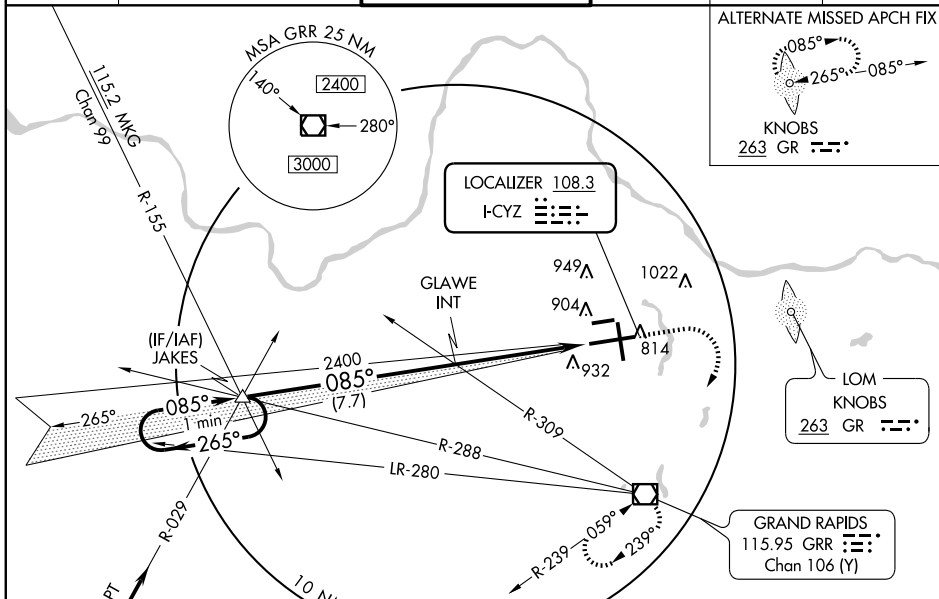
LOC I-CYZ 108.3	APP CRS 085°	Rwy Idg 10000 TDZE 794 Apt Elev 794
---------------------------	------------------------	--

ILS or LOC RWY 8R

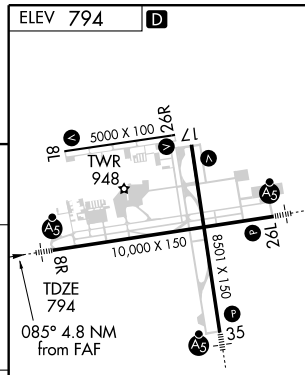
GRAND RAPIDS / GERALD R. FORD INTL (GRR)

<p>V *RVR 1800 authorized with the use of FD or AP or HUD to DA. When local altimeter setting not received, use Holland altimeter setting and increase all DA 76 feet and all MDA 80 feet, increase S-LOC 8R Cat C visibility to RVR 5000, and Cat D to RVR 6000. For inoperative MALSR when using Holland altimeter setting, increase S-ILS 8R all Cats visibility to RVR 5000.</p> <p>ASR</p>	<p>MALSR</p>	<p>MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct GRR VOR/DME and hold.</p>
---	---------------------	--

ATIS 127.1	GRAND RAPIDS APP CON * 128.4 257.6	GRAND RAPIDS TOWER * 135.65 (CTAF) 339.8	GND CON 121.8	CLNC DEL 119.3	UNICOM 122.95
-----------------------------	---	---	--------------------------------	---------------------------------	--------------------------------



CATEGORY	A	B	C	D
S-ILS 8R	*994/24 200 (200-1/2)			
S-LOC 8R	1240/24 446 (500-1/2)	1240/40 446 (500-3/4)	1240/50 446 (500-1)	
CIRCLING	1280-1 486 (500-1)	1280-1 1/2 486 (500-1/2)	1360-2 566 (600-2)	



MIRL Rwy 8L-26R	1
REIL Rwy 8L, 26R and 17	1
HIRL Rwy 8R-26L and 17-35	1
FAF to MAP 4.8 NM	
Knots	60 90 120 150 180
Min:Sec	4:48 3:12 2:24 1:55 1:36

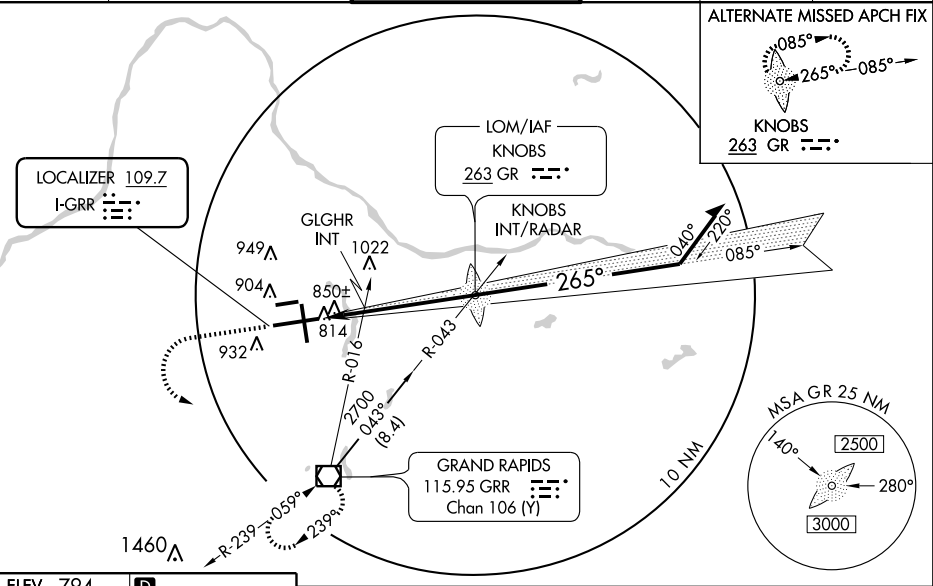
LOC I-GRR	APP CRS	Rwy Idg	10000
109.7	265°	TDZE	790
		Apt Elev	794

⚠ When local altimeter setting not received, use Holland altimeter setting and increase all DA 76 feet and all MDA 80 feet, increase S-LOC 26L Cat C visibility to RVR 6000, Cat D to 1½ miles, Circling Cat C to 1¼ miles, GLGHR INT minimums S-LOC 26L Cat C to RVR 4000. For inoperative MALSRR when using GLGHR INT minimums, increase S-LOC 26L Cat D visibility to RVR 5000. For inoperative MALSRR when using Holland altimeter setting, increase S-ILS 26L all Cats visibility to RVR 5000.
****RVR 1800 authorized with the use of FD or AP or HUD to DA.**

MALSRR

MISSED APPROACH:
Climb to 1300 then
climbing left turn to
3000 direct
GRR VOR/DME
and hold.

ATIS	GRAND RAPIDS APP CON ★	GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
127.1	128.4 257.6	135.65 (CTAF) 0 339.8	121.8	119.3	122.95



ELEV 794 **D**

MIRL Rwy 8L-26R **L**
REIL Rwy 8L, 26R and 17 **L**
HIRL Rwy 8R-26L and 17-35 **L**

FAF to MAP 5.7 NM

Knots	60	90	120	150	180
Min:Sec	5:42	3:48	2:51	2:17	1:54

1300 3000 GRR 115.95

VGSI and ILS glidepath not coincident.

1.7 NM 4 NM

CATEGORY	A	B	C	D
S-ILS 26L	** 990/24 200 (200-½)			
S-LOC 26L	1360/24 570 (600-½)	1360/50 570 (600-1)	1360/60 570 (600-1½)	
CIRCLING	1360-1 566 (600-1)	1360-1½ 566 (600-1½)	1360-2 566 (600-2)	
GLGHR INT MINIMUMS				
S-LOC 26L	1120/24 330 (400-½)			1120/40 330 (400-¾)
CIRCLING	1280-1 486 (500-1)	1280-1½ 486 (500-1½)	1360-2 566 (600-2)	

EC-1, 17 DEC 2009 to 14 JAN 2010

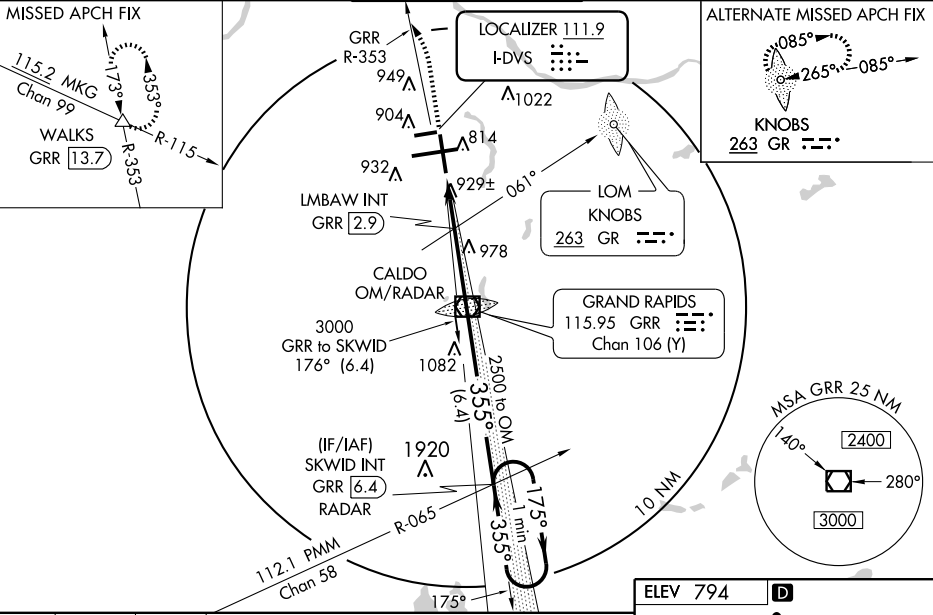
LOC I-DVS	APP CRS	Rwy Idg	8501
111.9	355°	TDZE	790
		Apt Elev	794

When local altimeter setting not received, use Holland altimeter setting and increase all DA 76 feet and all MDA 80 feet. Increase S-LOC 35 Cat B visibility to RVR 4000 and Cat C/D visibility ¼ mile. Increase Cat B/C/D Circling visibility ¼ mile.
LMBAW INT MINIMUMS: Increase S-LOC 35 Cat C visibility to RVR 4000 and Cat D to RVR 5000. For inoperative MALSR when using Holland altimeter setting, increase S-ILS 35 all Cats visibility to RVR 5000.
**RVR 1800 authorized with the use of FD or AP or HUD to DA.

MALSR

MISSED APPROACH: Climb to 1300 then climbing left turn to 3000 via GRR VOR/DME R-353 to WALKS INT/GRR 13.7 DME and hold.

ATIS	GRAND RAPIDS APP CON *	GRAND RAPIDS TOWER *	GND CON	CLNC DEL	UNICOM
127.1	128.4 257.6	135.65 (CTAF) 339.8	121.8	119.3	122.95



1300

3000

WALKS

VGSI and ILS glidepath not coincident.

CALDO OM/RADAR

SKWID INT GRR 6.4 RADAR

One Minute Holding Pattern

LMBAW INT GRR 2.9

GRR 4.9

2412

175°

355°

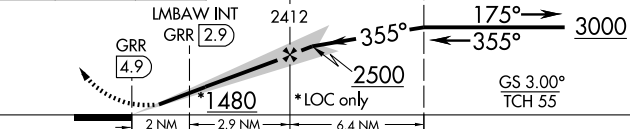
3000

2500

GS 3.00° TCH 55

*1480

*LOC only



CATEGORY	A	B	C	D
S-ILS 35	** 990/24 200 (200-½)			
S-LOC 35	1480/24	690 (700-½)	1480-1½ 690 (700-½)	1480-1¾ 690 (700-1¾)
CIRCLING	1480-1	686 (700-1)	1480-2 686 (700-2)	1480-2¼ 686 (700-2¼)
LMBAW FIX MINIMUMS				
S-LOC 35	1180/24 390 (400-½)			1180/40 390 (400-¾)
CIRCLING	1260-1	466 (500-1)	1260-1½ 466 (500-½)	1360-2 566 (600-2)

ELEV 794

D

MIRL Rwy 8L-26R

REIL Rwys 8L, 26R and 17

HIRL Rwys 8R-26L and 17-35

355° 4.9 NM from FAF

FAF to MAP 4.9 NM

Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

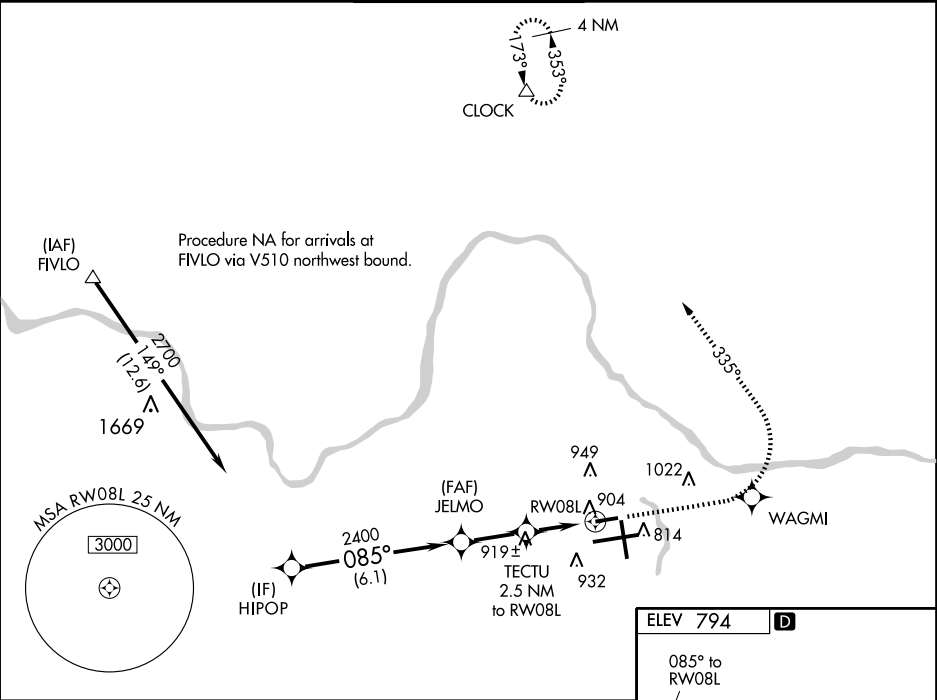
EC-1, 17 DEC 2009 to 14 JAN 2010

WAAS CH 40213 W08A	APP CRS 085°	Rwy Idg TDZE Apt Elev	5000 787 794
--	------------------------	-----------------------------	---

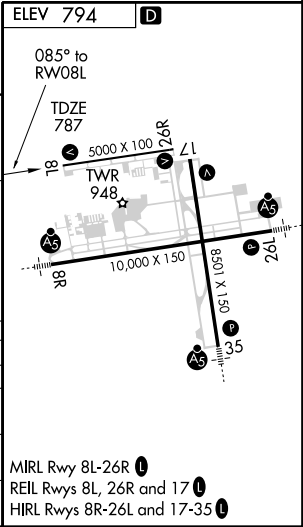
RNAV (GPS) RWY 8L

GRAND RAPIDS / GERALD R. FORD INTL (GRR)

▼ Baro-VNAV NA when using Holland altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. ▲ ASR Visibility reduction by helicopters NA. When local altimeter setting not received, use Holland altimeter setting and increase all DA 76 feet and all MDA 80 feet. Increase LPV and LNAV/VNAV visibility ¼ mile all Cats. Increase LNAV Cat C/D visibility ¼ mile.				MISSED APPROACH: Climb to 3000 direct WAGMI and left turn via track 335° to CLOCK and hold.	
ATIS 127.1	GRAND RAPIDS APP CON ★ 128.4 257.6	GRAND RAPIDS TOWER ★ 135.65 (CTAF) 0 339.8	GND CON 121.8	CLNC DEL 119.3	UNICOM 122.95



HIPOP		VGS1 and RNAV glidepath not coincident.		3000 ↑	WAGMI ✦	335° track ↷	CLOCK △
2700		085°		JELMO	TECTU 2.5 NM to RW08L		*LNAV only
Procedure Turn NA		2400		*1620	RW08L		
GS 3.00° TCH 45		6.1 NM		2.4 NM	2.5 NM		
CATEGORY	A	B	C	D			
LPV DA	1037-1 250 (300-1)						
LNAV/VNAV DA	1204-1 ½ 417 (500-1 ½)						
LNAV MDA	1180-1 393 (400-1)					1180-1 ¼ 393 (400-1 ¼)	
CIRCLING	1260-1 466 (500-1)			1260-1 ½ 466 (500-1 ½)		1360-2 566 (600-2)	



RNAV (GPS) RWY 8R

GRAND RAPIDS / GERALD R. FORD INTL (GRR)

WAAS CH 40113 W08B	APP CRS 085°	Rwy Idg TDZE Apt Elev	10000 794 794
--	------------------------	-----------------------------	--

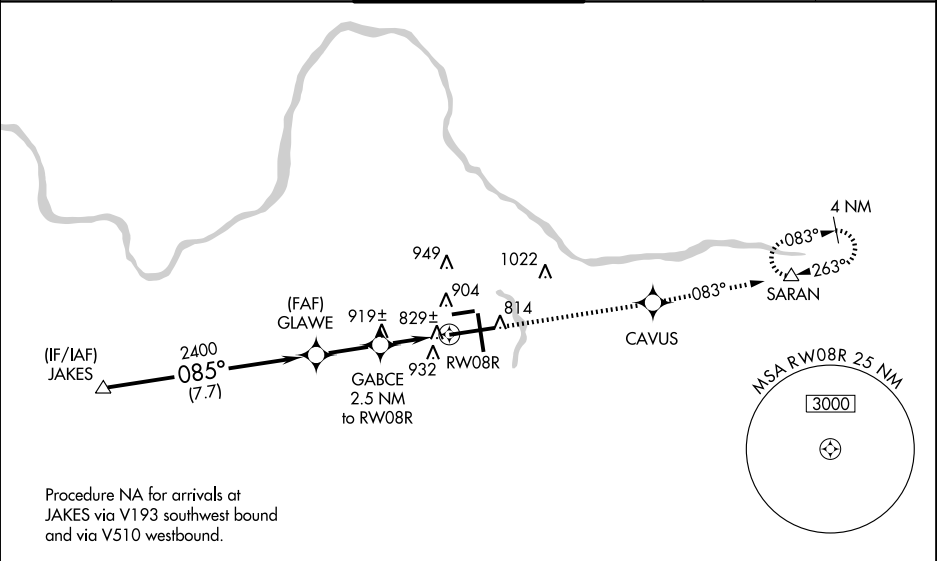
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. VDP and Baro-VNAV NA when using Holland altimeter setting. When local altimeter setting not received, use Holland altimeter setting and increase all DA 76 feet and all MDA 80 feet, LNAV/VNAV all Cats visibility to RVR 6000, LNAV Cat C to RVR 4000. For inoperative MALSR, increase LNAV Cat D visibility to RVR 6000. For inoperative MALSR when using Holland altimeter setting, increase LPV all Cats visibility to RVR 5000.

MALSR



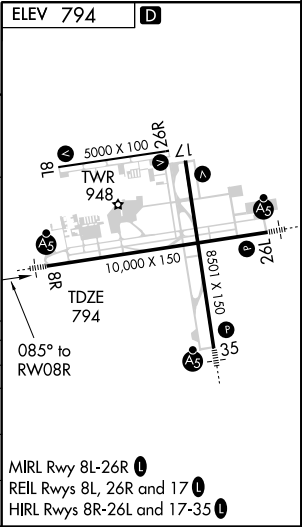
MISSED APPROACH: Climb to 2700 direct CAVUS and via track 083° to SARAN and hold.

ATIS 127.1	GRAND RAPIDS APP CON ★ 128.4 257.6	GRAND RAPIDS TOWER ★ 135.65 (CTAF) 339.8	GND CON 121.8	CLNC DEL 119.3	UNICOM 122.95
----------------------	--	--	-------------------------	--------------------------	-------------------------



Procedure NA for arrivals at JAKES via V193 southwest bound and via V510 westbound.

<div><div>ELEV 794</div><div>D</div></div>				
<div><div>JAKES</div><div>2700</div><div>085°</div><div>GLAWE</div><div>2400</div><div>1640</div><div>RW08R</div><div>1920</div><div>2700</div><div>CAVUS</div><div>TRK 083°</div><div>SARAN</div><div>GABCE 2.5 NM to RW08R</div><div>*1.1 NM to RW08R</div><div>*LNAV only</div></div>				
<div><div>7.7 NM</div><div>2.3 NM</div><div>1.4 NM</div><div>1.1 NM</div></div>				
CATEGORY	A	B	C	D
LPV DA	994/24 200 (200-½)			
LNAV/VNAV DA	1213/50 419 (500-1)			
LNAV MDA	1180/24 386 (400-½)		1180/50 386 (400-1)	
CIRCUING	1260-1 466 (500-1)		1260-1½ 466 (500-1½)	
		566 (600-2)		



WAAS CH 93912 W17A	APP CRS 175°	Rwy Idg TDZE Apt Elev	8501 789 794
--	------------------------	-----------------------------	---

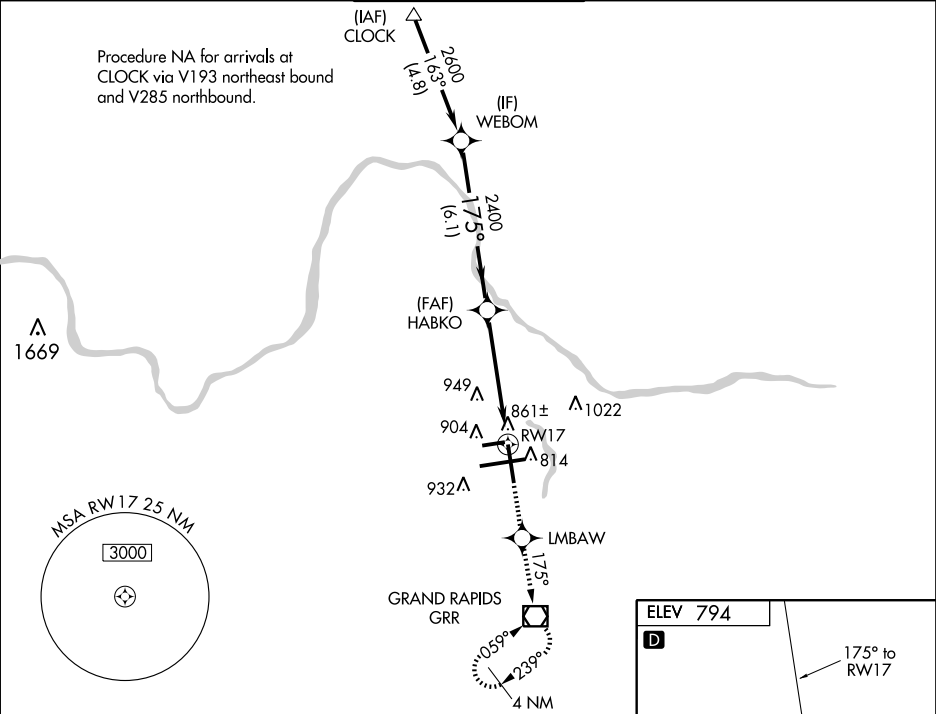
RNAV (GPS) RWY 17

GRAND RAPIDS / GERALD R. FORD INTL (GRR)

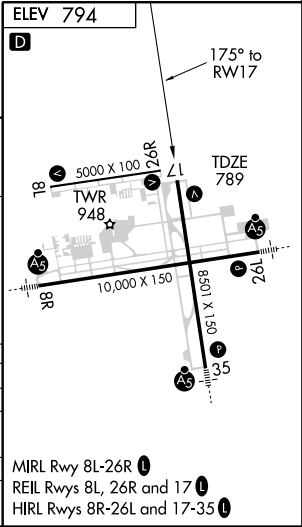
⚠ For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by Helicopters NA. When local altimeter ASR setting not received, use Holland altimeter setting and increase all DA 76 feet and all MDA 80 feet. Increase LPV visibility ½ mile all Cats and LNAV/VNAV visibility ¼ mile all Cats. Increase LNAV Cat D visibility ¼ mile. Baro-VNAV and VDP NA when using Holland altimeter setting.

MISSED APPROACH: Climb to 3000 direct LMBAW and via track 175° to GRR VOR/DME and hold, continue climb-in-hold to 3000.

ATIS 127.1	GRAND RAPIDS APP CON ★ 128.4 257.6	GRAND RAPIDS TOWER ★ 135.65 (CTAF) 0 339.8	GND CON 121.8	CLNC DEL 119.3	UNICOM 122.95
----------------------	--	--	-------------------------	--------------------------	-------------------------



	WEBOM	VGSI and RNAV glidepath not coincident.	3000	LMBAW	175° track	GRR
	2600	175°	HABKO	*1.2 NM to RWY 17	RWY 17	
	Procedure Turn NA			*LNAV only		
	GS 3.00°	2400				
	TCH 50	6.1 NM	3.7 NM	1.2		
CATEGORY	A	B	C	D		
LPV DA		1108-1	319 (400-1)			
LNAV/VNAV DA		1259-1¾	470 (500-1¾)			
LNAV MDA	1200-1	411 (500-1)	1200-1¼	411 (500-1¼)		
			1260-1½	1360-2		
CIRCLING	1260-1	466 (500-1)	466 (500-1½)	566 (600-2)		



MIRL Rwy 8L-26R **1**
REIL Rwy 8L, 26R and 17 **1**
HIRL Rwy 8R-26L and 17-35 **1**

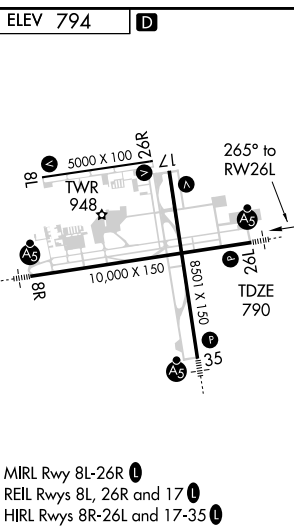
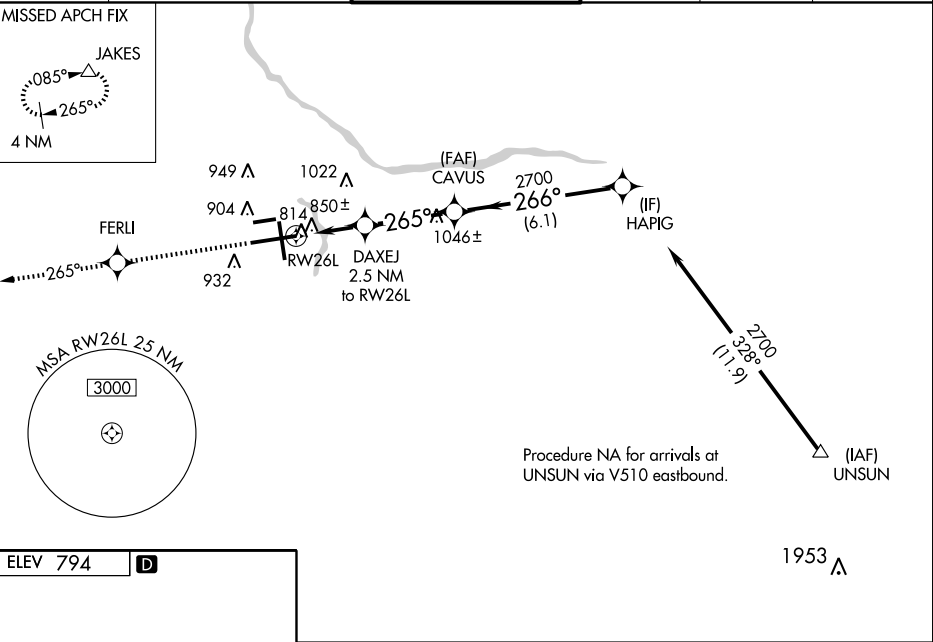
WAAS CH 86713 W26B	APP CRS 265°	Rwy Idg TDZE Apt Elev	10000 790 794
--	------------------------	-----------------------------	--

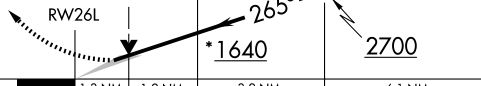
⚠ For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. VDP and Baro-VNAV NA when using Holland altimeter setting. When local altimeter setting not received, use Holland altimeter setting and increase all DA 76 feet and all MDA 80 feet, LNAV/VNAV Cats A/B/C visibility to RVR 4000, LNAV Cat C to RVR 5000, Cat D to RVR 6000. For inoperative MALSR, increase LNAV/VNAV Cat D visibility to RVR 5000. For inoperative MALSR when using Holland altimeter setting, increase LPV all Cats visibility to RVR 5000.

MALSR

MISSED APPROACH: Climb to 2700 direct FERLI and via 265° track to JAKES and hold.

ATIS 127.1	GRAND RAPIDS APP CON ★ 128.4 257.6	GRAND RAPIDS TOWER ★ 135.65 (CTAF) 339.8	GND CON 121.8	CLNC DEL 119.3	UNICOM 122.95
----------------------	--	--	-------------------------	--------------------------	-------------------------



2700 ↑	FERLI ✱	TRK 265°	JAKES △	VGSI and RNAV glidepath not coincident.			Procedure Turn NA	
*LNAV only				DAXEJ 2.5 NM to RW26L	CAVUS	HAPIG		
				265°		266°		2700
				*1.3 NM to RW26L				GS 3.00° TCH 55
				1.3 NM		1.2 NM		3.2 NM
						6.1 NM		
CATEGORY		A		B		C		D
LPV	DA	990/24 200 (200-½)						
LNAV/ VNAV	DA	1114/24 324 (400-½)						1114/40 324 (400-¾)
LNAV	MDA	1280/24 490 (500-½)			1280/40 490 (500-¾)		1280/50 490 (500-1)	
CIRCLING		1280-1 486 (500-1)			1280-1½ 486 (500-1½)		1360-2 566 (600-2)	

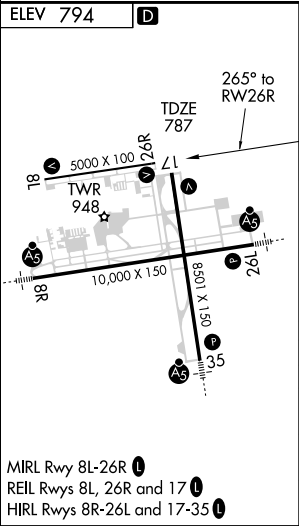
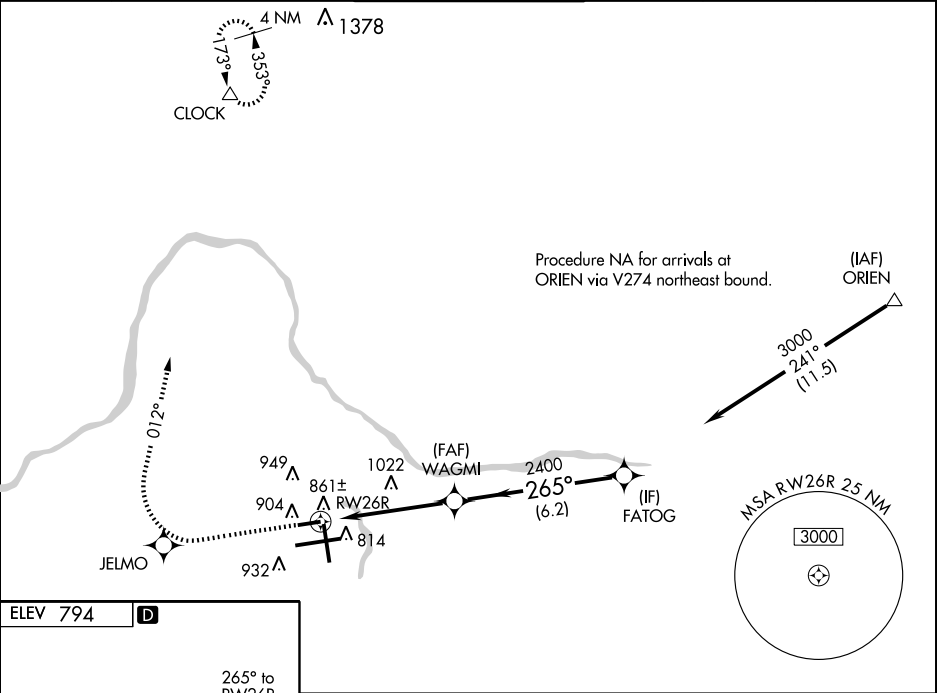
WAAS CH 82413 W26A	APP CRS 265°	Rwy Idg TDZE Apt Elev	5000 787 794
--	------------------------	-----------------------------	---

RNAV (GPS) RWY 26R

GRAND RAPIDS / GERALD R. FORD INTL (GRR)

Baro-VNAV NA when using Holland altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.	MISSED APPROACH: Climb to 3000 direct JELMO and right turn via track 012° to CLOCK and hold.
ASR Visibility reduction by helicopters NA. When local altimeter setting not received, use Holland altimeter setting and increase all DA 76 feet and all MDA 80 feet. Increase LPV and LNAV/VNAV visibility ¼ mile all Cats. Increase LNAV Cat C/D ¼ mile.	

ATIS 127.1	GRAND RAPIDS APP CON ★ 128.4 257.6	GRAND RAPIDS TOWER ★ 135.65 (CTAF) 0 339.8	GND CON 121.8	CLNC DEL 119.3	UNICOM 122.95
----------------------	--	--	-------------------------	--------------------------	-------------------------



3000	JELMO	CLOCK 012° track	VGSI and RNAV glidepath not coincident.	FATOG Procedure Turn NA
3000	WAGMI	265°	2400	3000
RW26R		4.9 NM	6.2 NM	GS 3.00° TCH 50
CATEGORY	A	B	C	D
LPV DA	1037-1 250 (300-1)			
LNAV/VNAV DA	1216-1½ 429 (500-1½)			
LNAV MDA	1280-1 493 (500-1)	1280-1¼ 493 (500-1¼)	1280-1½ 493 (500-1½)	
CIRCLING	1280-1 486 (500-1)	1280-1½ 486 (500-1½)	1360-2 566 (600-2)	

MIRL Rwy 8L-26R
REIL Rwy 8L, 26R and 17
HIRL Rwy 8R-26L and 17-35

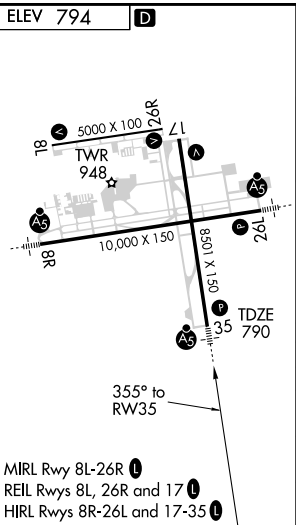
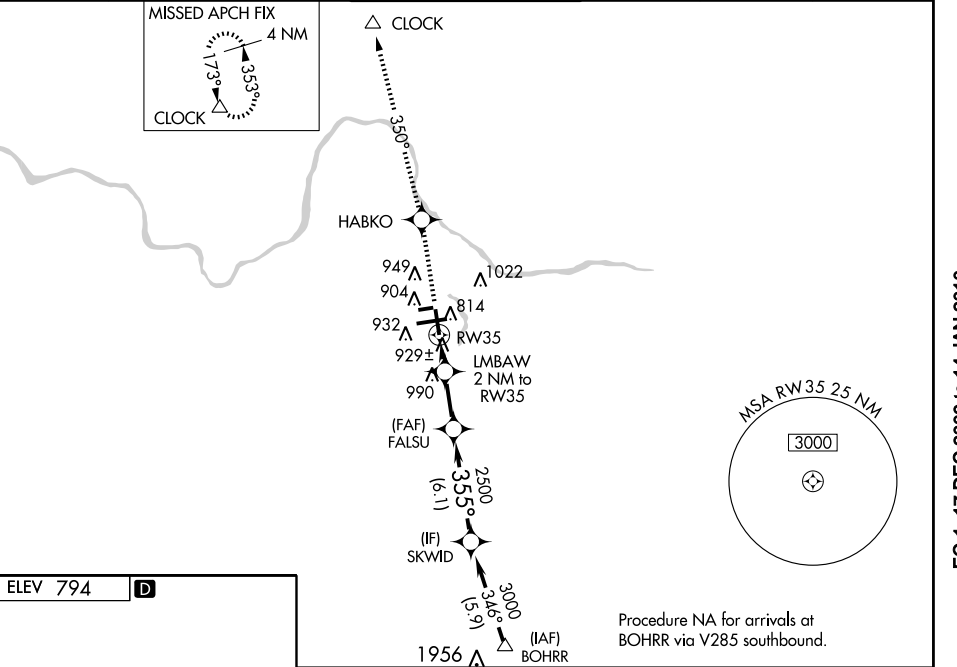
WAAS CH 87112 W35A	APP CRS 355°	Rwy Idg TDZE Apt Elev	8501 790 794
--	------------------------	-----------------------------	---

ASR For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Holland altimeter setting and increase all DA 76 feet and all MDA 80 feet. Increase LNAV/VNAV visibility to RVR 6000 all Cats and LNAV Cat C visibility to RVR 4000. For inoperative MALSR, increase LNAV Cat D visibility to RVR 6000. For inoperative MALSR when using Holland altimeter setting increase LPV all Cats visibility to RVR 5000. Baro-VNAV and VDP NA when using Holland altimeter setting.

MALSR

MISSED APPROACH:
Climb to 3000 direct
HABKO and via track
350° to CLOCK and
hold.

ATIS 127.1	GRAND RAPIDS APP CON ★ 128.4 257.6	GRAND RAPIDS TOWER ★ 135.65 (CTAF) 0 339.8	GND CON 121.8	CLNC DEL 119.3	UNICOM 122.95
----------------------	--	--	-------------------------	--------------------------	-------------------------



3000 HABKO TRK 350° CLOCK

Procedure NA for arrivals at BOHRR via V285 southbound.

*LNAV only

LMBAW 2 NM to RW35

*1 NM to RW35

RW35

*1480

FALSU

2500

3000 SKWID

Procedure Turn NA

GS 3.00° TCH 55°

CATEGORY	A	B	C	D
LPV DA		990/24	200 (200-½)	
LNAV/VNAV DA		1236/50	446 (500-1)	
LNAV MDA		1180/24	390 (400-½)	1180/50 390 (400-1)
CIRCLING	1260-1	466 (500-1)	1260-1½ 466 (500-1½)	1360-2 566 (600-2)

EC-1.17 DEC 2009 to 14 JAN 2010

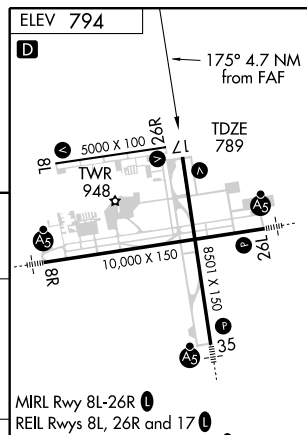
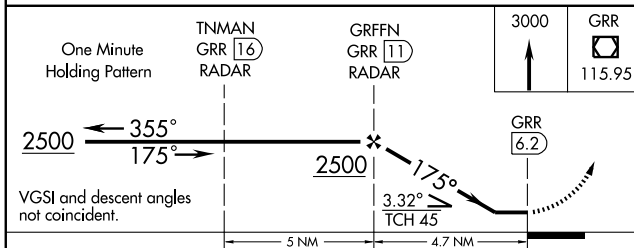
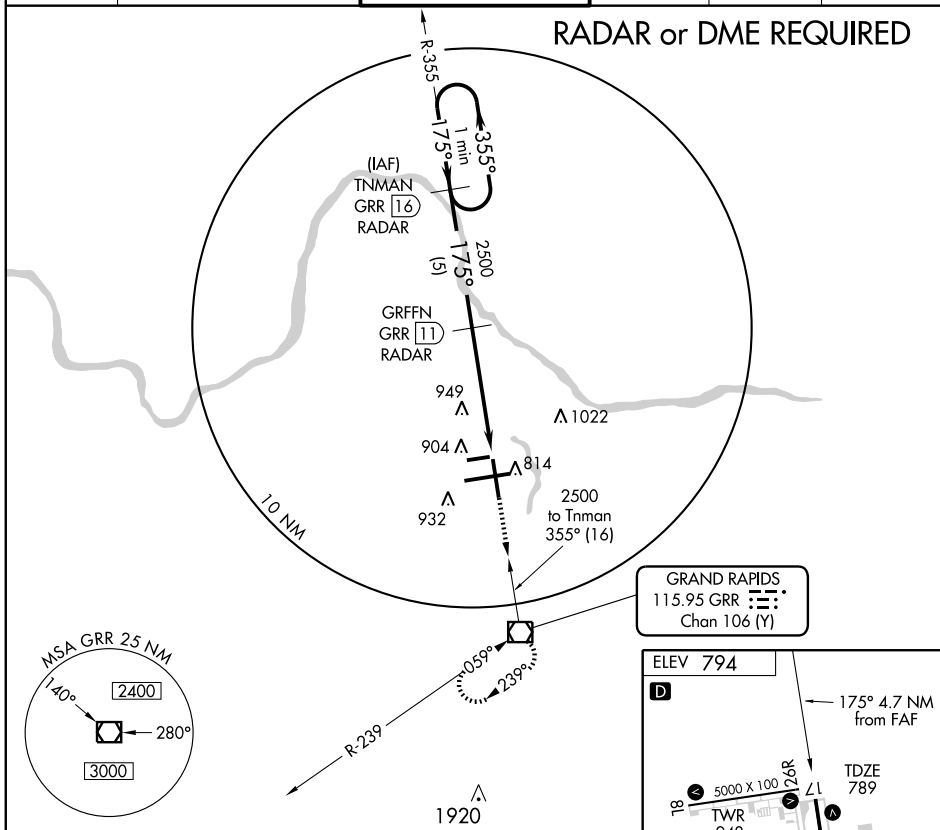
VOR/DME GRR 115.95 Chan 106 (Y)	APP CRS 175°	Rwy Idg 8501 TDZE 789 Apt Elev 794
---	------------------------	---

VOR RWY 17

GRAND RAPIDS / GERALD R. FORD INTL (GRR)

<div><div></div><div>ASR</div></div>			MISSED APPROACH: Climb to 3000 direct GRR VOR/DME and hold.		
ATIS 127.1	GRAND RAPIDS APP CON ★ 128.4 257.6	GRAND RAPIDS TOWER ★ 135.65 (CTAF) 0 339.8	GND CON 121.8	CLNC DEL 119.3	UNICOM 122.95

RADAR or DME REQUIRED



CATEGORY	A	B	C	D	HIRL Rwy 8R-26L and 17-35					
S-17	1200-1	411 (500-1)	1200-1¼	411 (500-1¼)	FAF to MAP 4.7 NM					
CIRCLING	1280-1	486 (500-1)	1280-1½	1360-2	Knots	60	90	120	150	180
			486 (500-1½)	566 (600-2)	Min:Sec	4:42	3:08	2:21	1:53	1:34

VOR/DME GRR 115.95 Chan 106 (Y)	APP CRS 355°	Rwy Idg 8501 TDZE 790 Apt Elev 794
---	------------------------	--

VOR RWY 35
GRAND RAPIDS / GERALD R. FORD INTL (GRR)

▼ When local altimeter setting not received, use Holland altimeter setting and increase all MDA 80 feet, S-35 Cat C visibility to RVR 5000, Cat D to RVR 6000, ALSKA INT minimums S-35 Cat C to RVR 4000.
▲ For inoperative MALSRR, increase ALSKA INT minimums S-35 Cat D visibility to RVR 6000.
ASR

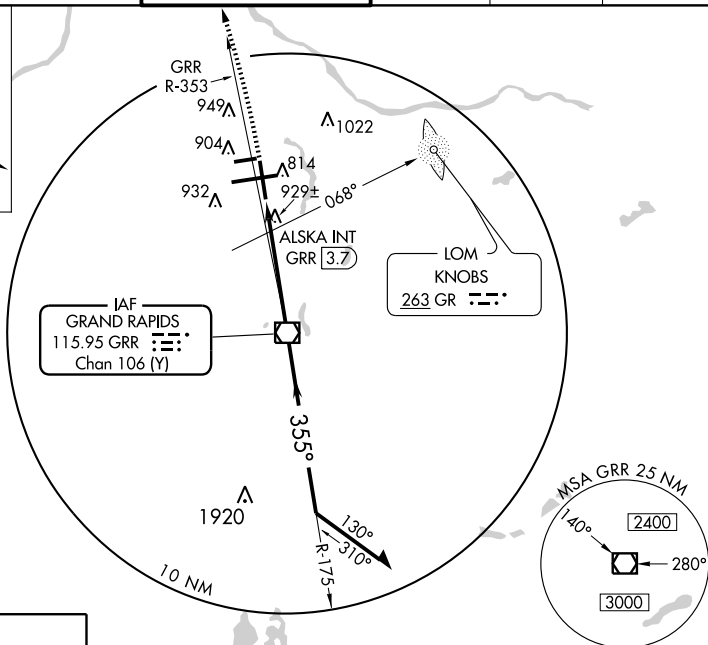
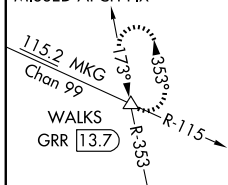
MALSR



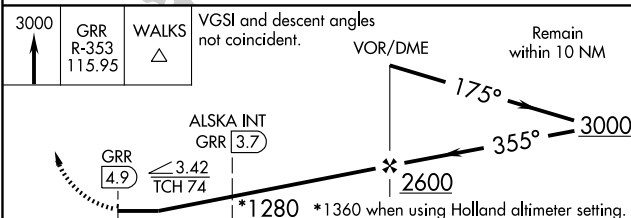
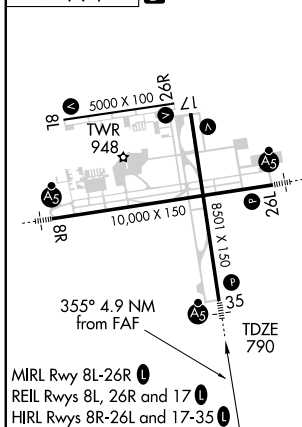
MISSED APPROACH: Climb to 3000 via GRR VOR/DME R-353 to WALKS INT/GRR 13.7 DME and hold.

ATIS 127.1	GRAND RAPIDS APP CON ★ 128.4 257.6	GRAND RAPIDS TOWER ★ 135.65 (CTAF) 0 339.8	GND CON 121.8	CLNC DEL 119.3	UNICOM 122.95
---------------	---------------------------------------	---	------------------	-------------------	------------------

MISSED APCH FIX



ELEV 794



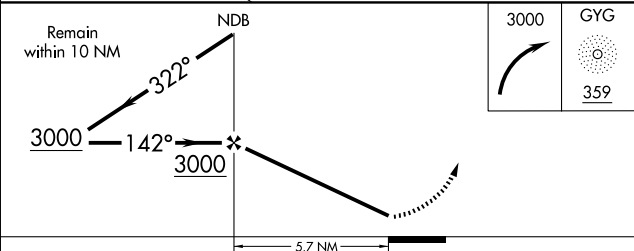
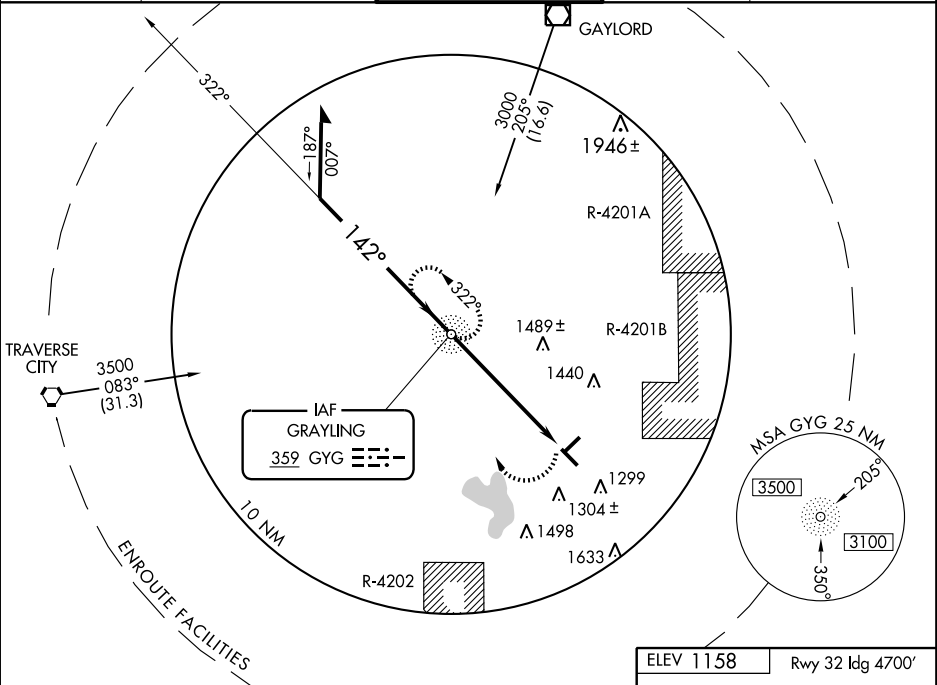
CATEGORY	A	B	C	D
S-35	1280/24	490 (500-½)	1280/40 490 (500-¾)	1280/50 490 (500-1)
CIRCLING	1280-1	486 (500-1)	1280-1½ 486 (500-1½)	1360-2 566 (600-2)
ALSKA INT MINIMUMS				
S-35	1180/24	390 (400-½)		1180/50 390 (400-1)
CIRCLING	1280-1	486 (500-1)	1280-1½ 486 (500-1½)	1360-2 566 (600-2)

NDB RWY 14
GRAYLING AAF (GOV)

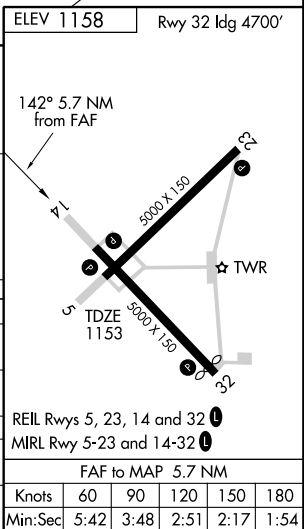
NDB GYG	APP CRS	Rwy Idg
<u>359</u>	<u>142°</u>	5000
		TDZE
		1153
		Apt Elev
		1158

NA	Use Houghton Lake altimeter setting; when not received, use Traverse City altimeter setting.	MISSED APPROACH: Climbing right turn to 3000 direct GYG NDB and hold.
----	--	---

AWOS-3 119.075	MINNEAPOLIS CENTER 132.9 338.3	GRAYLING TOWER ★ 126.2 241.0	GND CON 121.9	UNICOM 122.8 (CTAF) 0
--------------------------	--	--	-------------------------	---------------------------------



CATEGORY	A	B	C	D
S-14	1820-1	667 (700-1)	1820-1¾ 667 (700-1¾)	1820-2 667 (700-2)
CIRCLING	1820-1	662 (700-1)	1820-1¾ 662 (700-1¾)	1820-2 662 (700-2)
TRAVERSE CITY ALTIMETER SETTING MINIMUMS				
S-14	1980-1 827 (800-1)	1980-1¼ 827 (800-1¼)	1980-2½ 827 (800-2½)	1980-2¾ 827 (800-2¾)
CIRCLING	1980-1 822 (900-1)	1980-1¼ 822 (900-1¼)	1980-2½ 822 (900-2½)	1980-2¾ 822 (800-2¾)



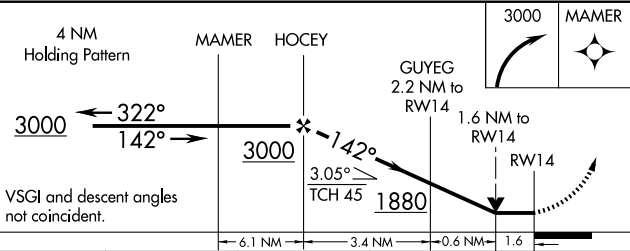
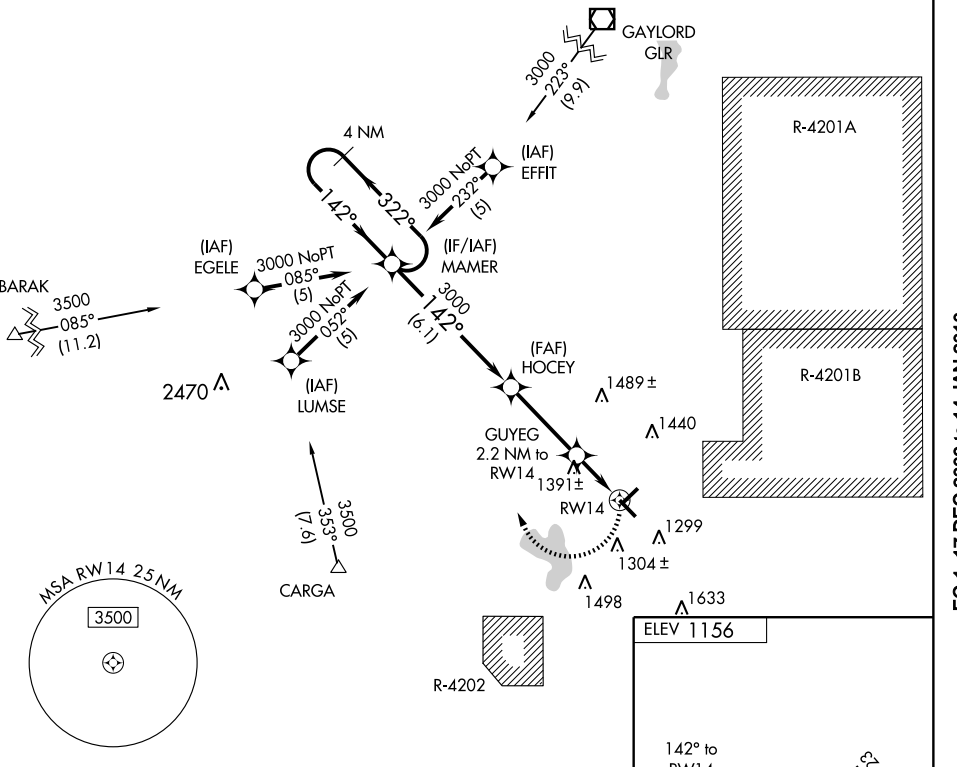
▼ DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

▲ VDP NA when using Houghton Lake altimeter setting.

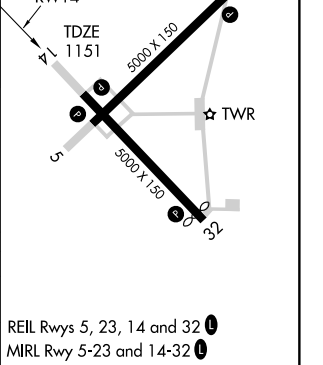
When local altimeter setting not received, use Houghton Lake altimeter setting and increase all MDA 60 feet, increase LNAV Cat C and D and Circling Cat C visibility ¼ mile.

MISSED APPROACH: Climbing right turn to 3000 direct MAMER and hold.

AWOS-3 119.075	MINNEAPOLIS CENTER 132.9 338.3	GRAYLING TOWER ★ 126.2 241.0	GND CON 121.9	UNICOM 122.8 (CTAF) 0
-------------------	-----------------------------------	---------------------------------	------------------	--------------------------



CATEGORY	A	B	C	D
LNAV MDA	1700-1	549 (600-1)	1700-1½ 549 (600-1½)	1700-1¾ 549 (600-1¾)
CIRCLING	1720-1	564 (600-1)	1720-1½ 564 (600-1½)	1760-2 604 (700-2)



EC-1, 17 DEC 2009 to 14 JAN 2010

VOR RWY 14
GRAYLING AAF (GOV)

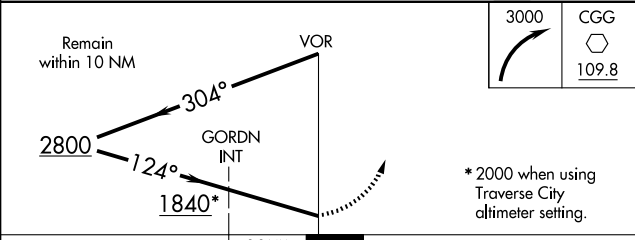
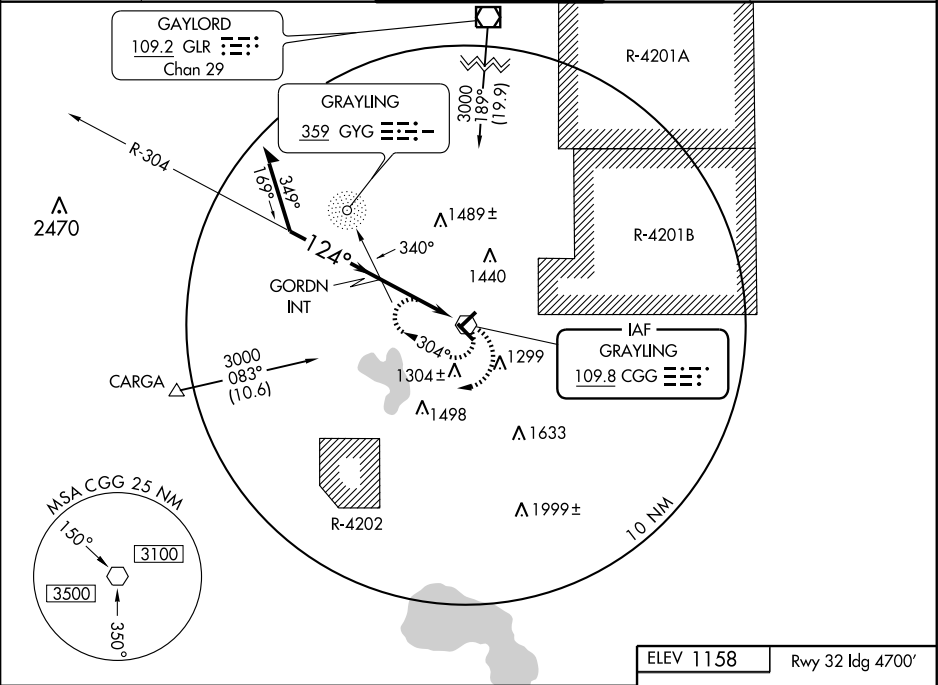
VOR CGG	APP CRS	Rwy Idg	5000
109.8	124°	TDZE	1153
		Apt Elev	1158

▼ Use Houghton Lake altimeter setting; when not received, use Traverse City altimeter setting and increase all MDAs 160 feet and all visibilities ½ mile.

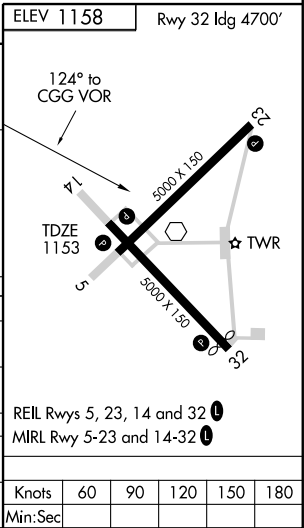
▲ NA

MISSED APPROACH: Climbing right turn to 3000 in CGG VOR holding pattern.

AWOS-3 119.075	MINNEAPOLIS CENTER 132.9 338.3	GRAYLING TOWER ★ 126.2 241.0	GND CON 121.9	UNICOM 122.8 (CTAF) ①
-------------------	-----------------------------------	---------------------------------	------------------	--------------------------



CATEGORY	A	B	C	D
S-14	1840-1 687 (700-1)		1840-2 687 (700-2)	1840-2 ¼ 687 (700-2 ¼)
CIRCLING	1840-1 682 (700-1)		1840-2 682 (700-2)	1840-2 ¼ 682 (700-2 ¼)
GORDN INT MINIMUMS				
S-14	1720-1 567 (600-1)		1720-1 ½ 567 (600-1 ½)	1720-1 ¾ 567 (600-1 ¾)
CIRCLING	1720-1 562 (600-1)	1780-1 622 (700-1)	1780-1 ¾ 622 (700-1 ¾)	1800-2 642 (700-2)



APP CRS	Rwy Idg	4199
099°	TDZE	855
	Apt Elev	855

RNAV (GPS) RWY 10

GREENVILLE MUNI (6D6)

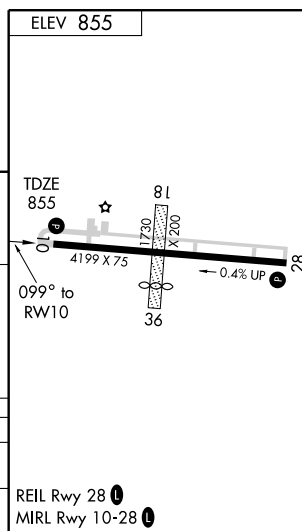
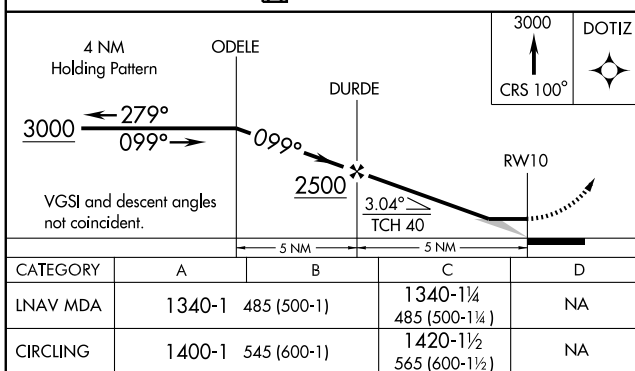
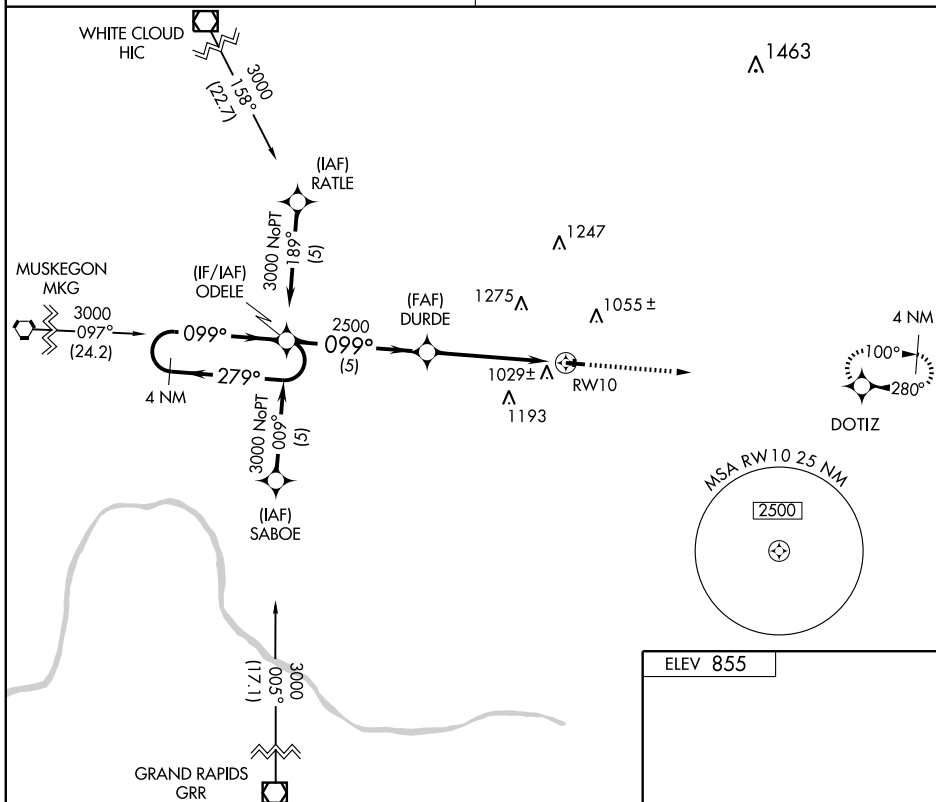
T Use Grand Rapids/Gerald R. Ford Intl altimeter setting.
GPS or RNP-0.3 required.

A NA DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3000 via 100° course to DOTIZ WP and hold.

GRAND RAPIDS APP CON ★
124.6 257.6

UNICOM
122.8 (CTAF) **L**



APP CRS	Rwy Idg	4199
280°	TDZE	847
	Apt Elev	855

▼

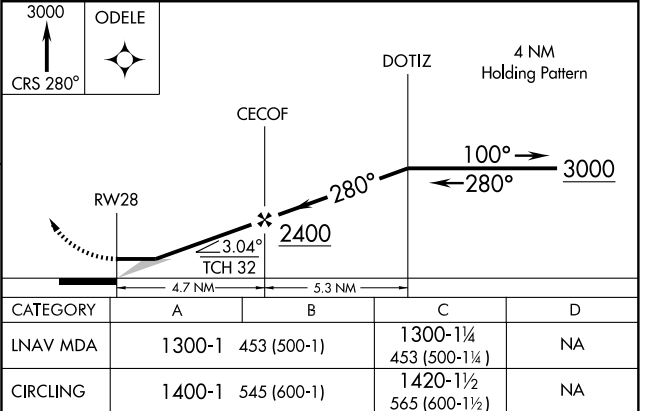
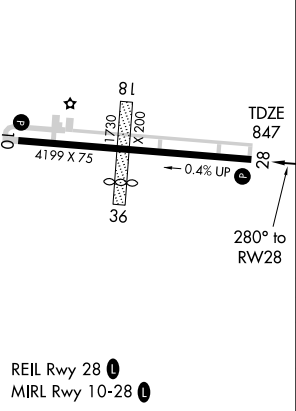
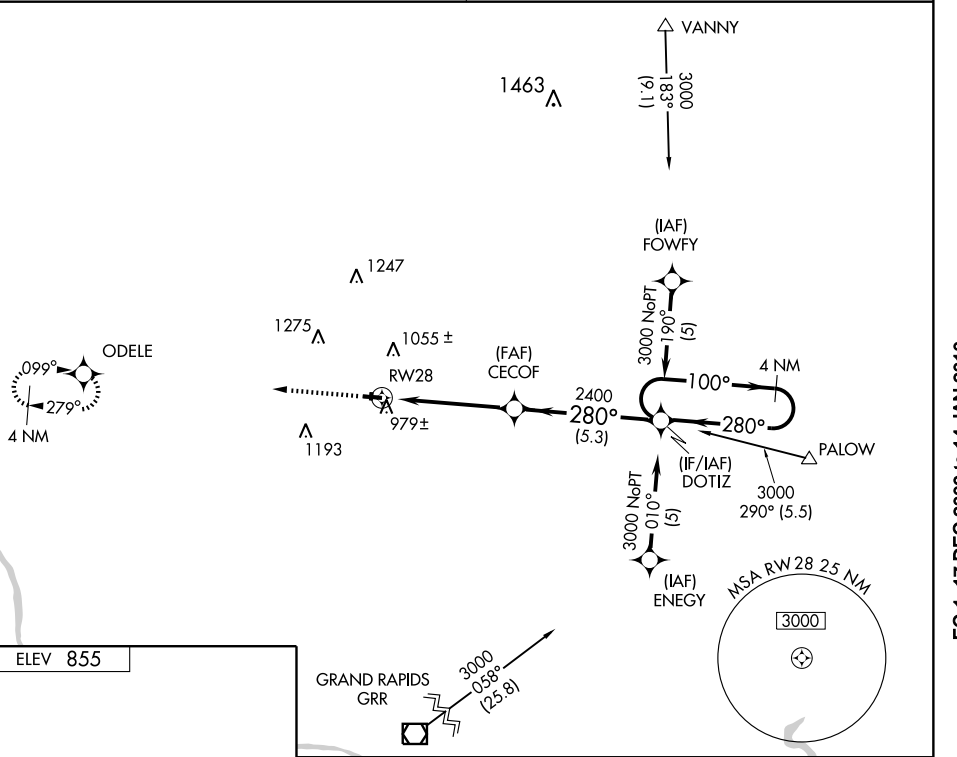
Use Grand Rapids/Gerald R. Ford Intl altimeter setting.

▲ NA

GPS or RNP-0.3 required.
DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3000 via 280° course to ODELE WP and hold.

GRAND RAPIDS APP CON ★ 124.6 257.6	UNICOM 122.8 (CTAF) 0
---------------------------------------	--------------------------



EC-1.17 DEC 2009 to 14 JAN 2010

▼

▲ NA

Use Grand Rapids/Gerald R. Ford Intl altimeter setting.

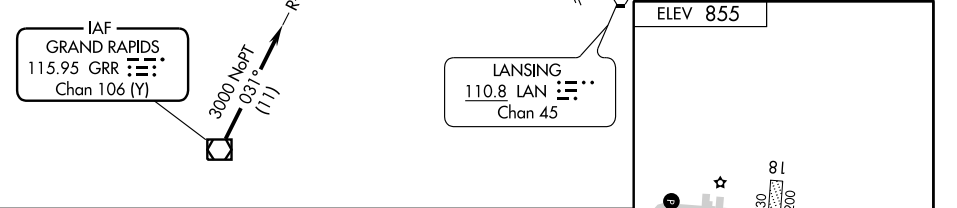
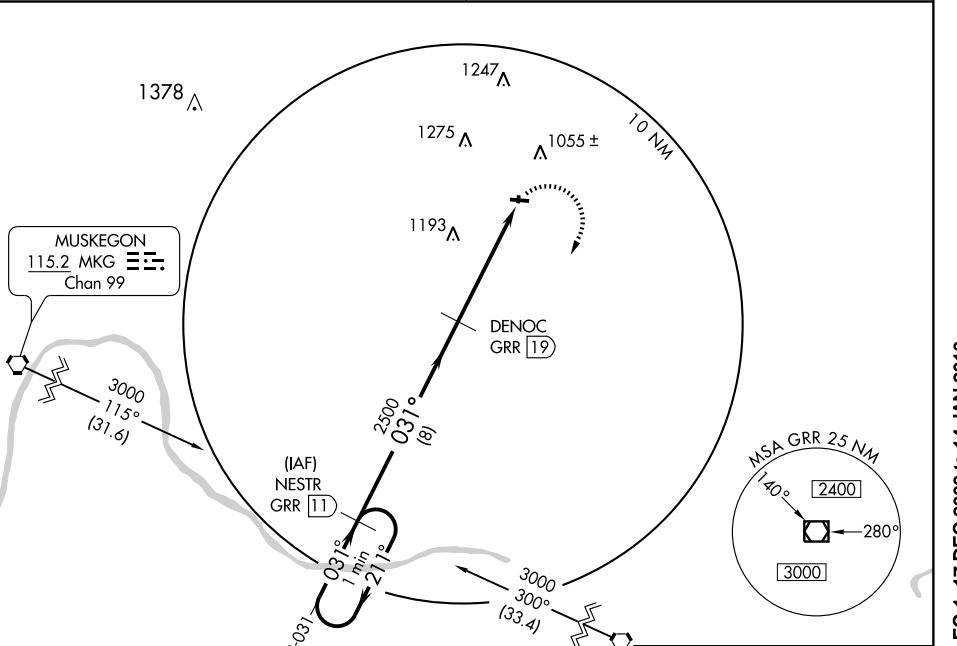
MISSED APPROACH: Climbing right turn to 3000 via the GRR VOR/DME R-031 to NESTR and hold.

GRAND RAPIDS APP CON ★

124.6 257.6

UNICOM

122.8 (CTAF) 0



One Minute Holding Pattern				
NESTR GRR 11				
3000 ← 211° 031° →				
DENOC GRR 19				
2500				
8 NM				
4.7 NM				
CATEGORY	A	B	C	D
CIRCLING	1500-1 645 (700-1)	1500-1¼ 645 (700-1¼)	1500-1¾ 645 (700-1¾)	NA

3000

GRR R-031 115.95

NESTR GRR 11

36

4199 X 75

1730 X 200

0.4% UP

01

28

031° 4.8 NM from FAF

REIL Rwy 28 0

MIRL Rwy 10-28 0

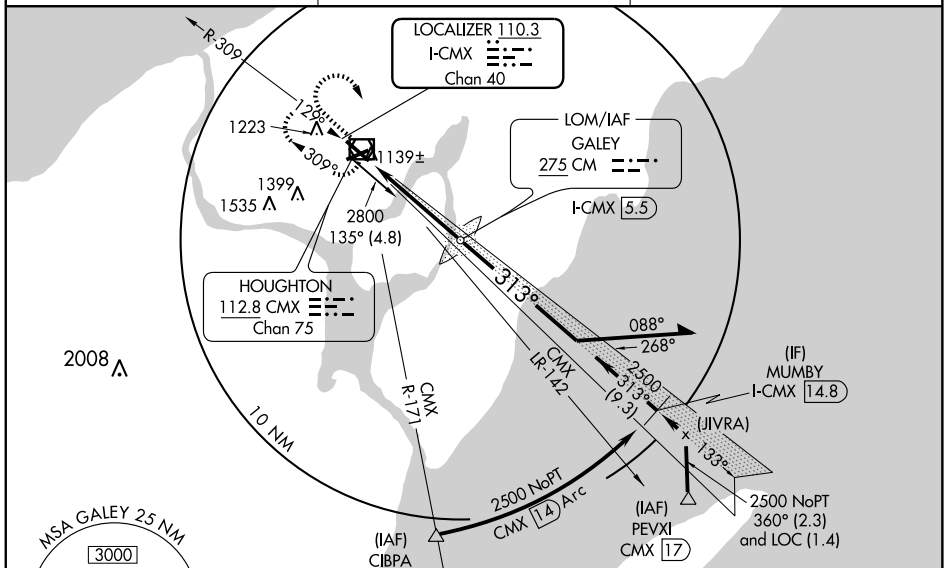
LOC/DME I-CMX	APP CRS	Rwy Idg	6501
110.3	313°	TDZE	1070
Chan 40		Apt Elev	1095

ILS or LOC RWY 31

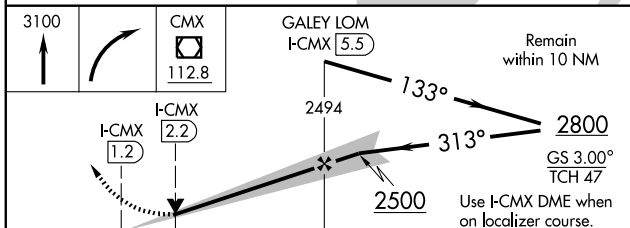
HANCOCK / HOUGHTON COUNTY MEMORIAL (CMX)

<p>▼ For inoperative MALS, increase S-LOC 31 Cat D visibility to 1 mile.</p> <p>▲ When local altimeter setting not received use Marquette altimeter setting and increase DA to 1441 and S-ILS 31 visibility to $\frac{3}{4}$, increase all MDA 180' and S-LOC 31 visibility Cat C to $\frac{3}{4}$ mile, Cat D to 1 mile. Increase Circling Cat C visibility to $1\frac{1}{4}$ mile, Cat D visibility to $2\frac{1}{2}$ mile. For inoperative MALS when using Marquette altimeter setting increase S-ILS 31 visibility all Cats to $1\frac{1}{4}$ mile.</p> <p>VDP NA when using Marquette altimeter setting. Request MRL Rwy 7-25 CTAF.</p>	<p>MALS</p>	<p>MISSED APPROACH:</p> <p>Climb to 3100 then right turn direct CMX VOR/DME and hold.</p>
---	--------------------	--

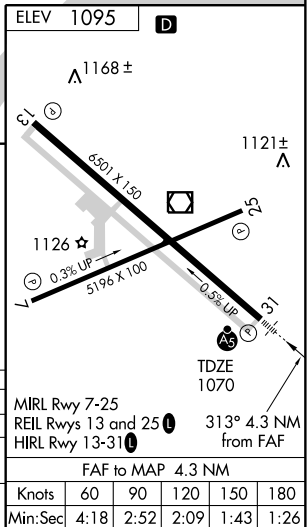
ASOS 125.675	MINNEAPOLIS CENTER 127.2 379.1	UNICOM 122.7 (CTAF) 0
------------------------	--	---------------------------------



ADF or DME REQUIRED



CATEGORY	A	B	C	D
S-ILS 31		1270- $\frac{1}{2}$	200 (200- $\frac{1}{2}$)	
S-LOC 31		1400- $\frac{1}{2}$	330 (400- $\frac{1}{2}$)	1400- $\frac{3}{4}$ 330 (400- $\frac{3}{4}$)
CIRCLING	1620-1 525 (600-1)	1640-1 545 (600-1)	1640- $\frac{1}{2}$ 545 (600- $\frac{1}{2}$)	1780-2 $\frac{1}{4}$ 685 (700-2 $\frac{1}{4}$)



MRL Rwy 7-25	REIL Rwy 13 and 25	313° 4.3 NM from FAF
HIRL Rwy 13-31		
FAF to MAP 4.3 NM		
Knots	60	90 120 150 180
Min:Sec	4:18	2:52 2:09 1:43 1:26

APP CRS	Rwy Idg	5196
069°	TDZE	1067
	Apt Elev	1095

RNAV (GPS) RWY 7

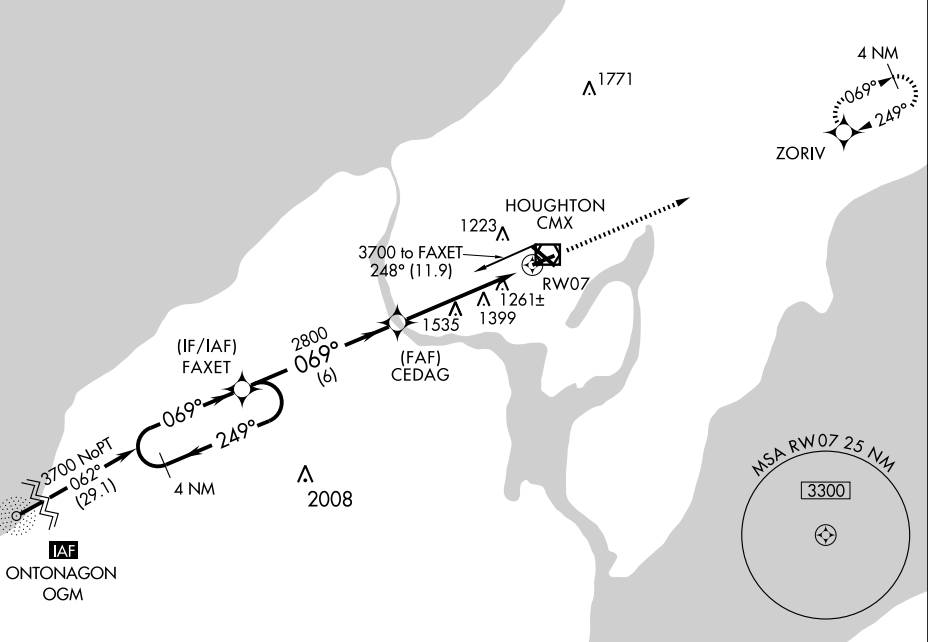
HANCOCK/ HOUGHTON COUNTY MEMORIAL (CMX)

 NA	Baro-VNAV NA below -17°C (2°F). GPS or RNP -0.3 required. DME/DME RNP -0.3 NA.	MISSED APPROACH: Climb to 3700 via 069° course to ZORIV WP and hold.
---	--	--

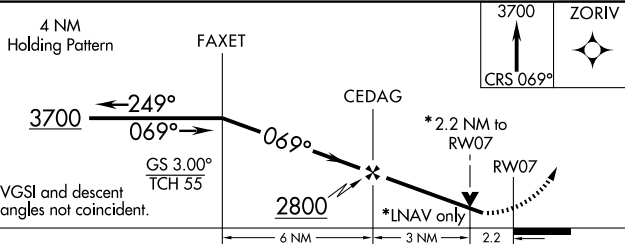
ASOS
125.675

MINNEAPOLIS CENTER
127.2 379.1

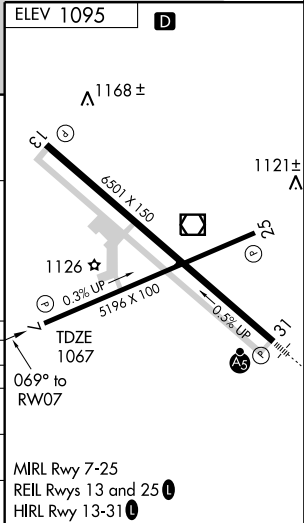
UNICOM
122.7 (CTAF) 





IAF ARM APPROACH MODE PRIOR TO IAF.



CATEGORY	A	B	C	D
GLS DA	NA			
LNNAV/ VNAV	1520-1½ 453 (500-1½)			
LNNAV MDA	1840-1 773 (800-1)	1840-1¼ 773 (800-1¼)	1840-2¼ 773 (800-2¼)	1840-2½ 773 (800-2½)
CIRCLING	1840-1½ 745 (800-1½)	1840-2¼ 745 (800-2¼)	1840-2½ 745 (800-2½)	1840-2½ 745 (800-2½)



MIRL Rwy 7-25
REIL Rwys 13 and 25 
HIRL Rwy 13-31 

APP CRS 133°	Rwy Idg TDZE Apt Elev	6501 1095 1095
------------------------	-----------------------------	---

RNAV (GPS) RWY 13

HANCOCK/ HOUGHTON COUNTY MEMORIAL (CMX)

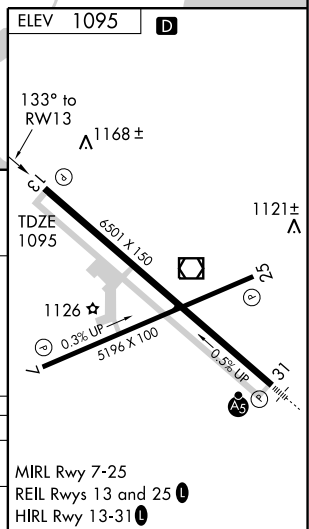
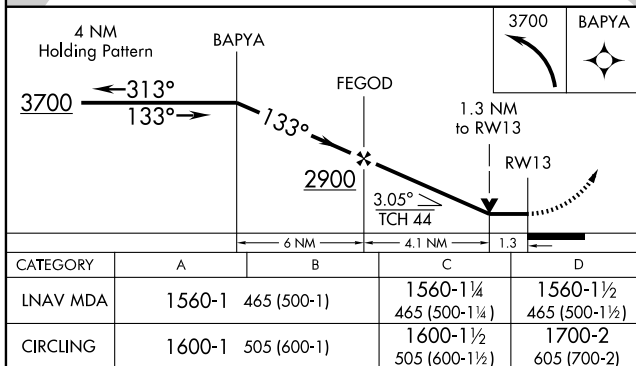
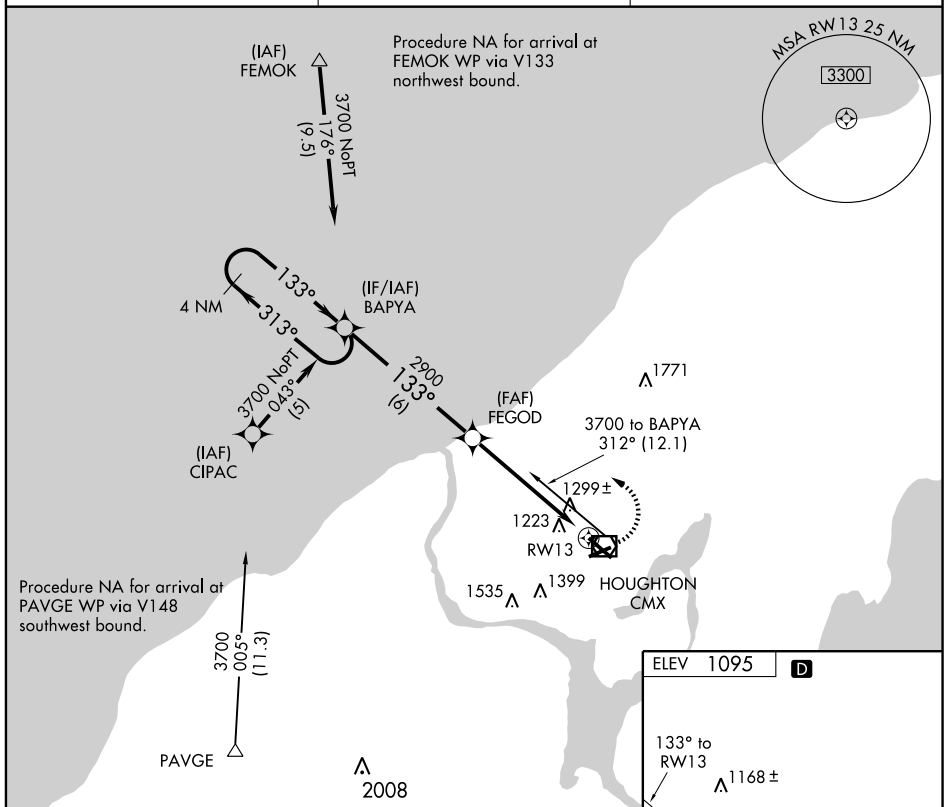
T GPS or RNP-0.3 required.
A NA DME/DME RNP-0.3 NA.

MISSED APPROACH: Climbing left turn to 3700 direct BAPYA WP and hold.

ASOS
125.675

MINNEAPOLIS CENTER
127.2 379.1

UNICOM
122.7 (CTAF) **L**



APP CRS	Rwy Idg	5196
249°	TDZE	1074
	Apt Elev	1095

RNAV (GPS) RWY 25

HANCOCK/HOUGHTON COUNTY MEMORIAL (CMX)

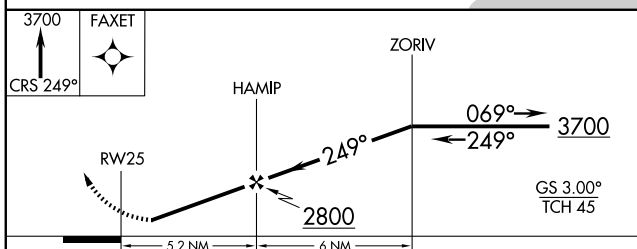
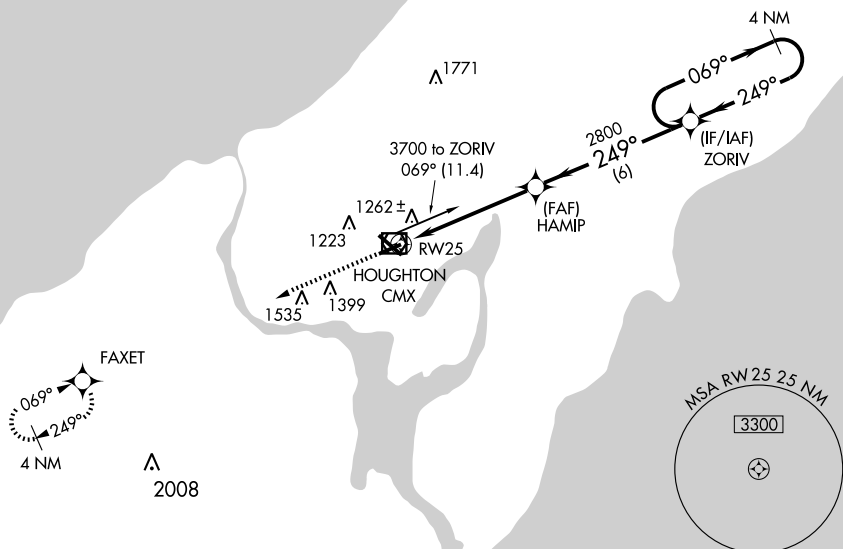


Baro-VNAV NA below -17°C (2°F)
GPS or RNP -0.3 required.
DME/DME RNP -0.3 NA.

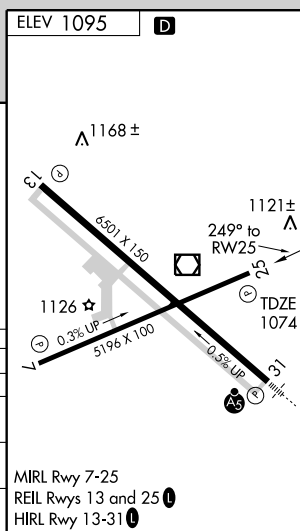
MISSED APPROACH: Climb to 3700 via 249° course to FAXET WP and hold.

ASOS
125.675

MINNEAPOLIS CENTER
127.2 379.1

UNICOM
122.7 (CTAF) **L**

CATEGORY	A	B	C	D
GLS DA	NA			
LNAV/ VNAV DA	1520-1½ 446 (500-1½)			
LNAV MDA	1520-1 446 (500-1)		1520-1¼ 446 (500-1¼)	1520-1½ 446 (500-1½)
CIRCLING	1580-1½ 485 (500-1½)			1700-2 605 (700-2)



▼

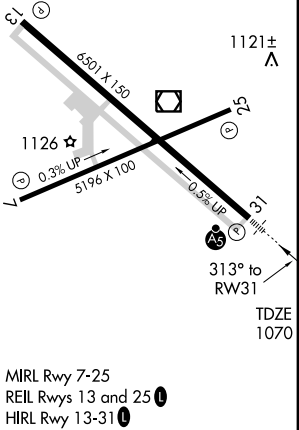
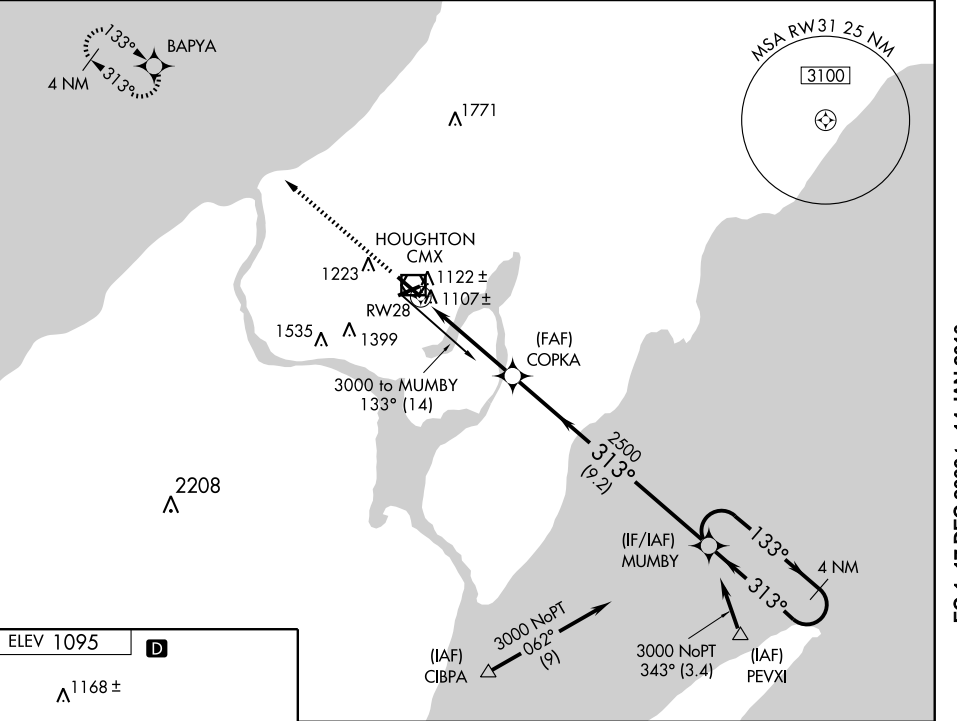
▲


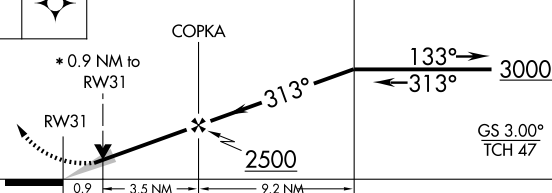
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. For inoperative MALSR, increase LPV visibility all Cats to 1 mile, increase LNAV/VNAV Cat D visibility to 1 mile. Inoperative table does not apply to LNAV Cat D.

MALSR

MISSED APPROACH:
Climb to 3700 direct
BAPYA and hold.

ASOS 125.675	MINNEAPOLIS CENTER 127.2 379.1	UNICOM 122.7 (CTAF)
-----------------	-----------------------------------	------------------------



3700 ↑	BAPYA 	* LNAV Only.	4 NM Holding Pattern			
						
CATEGORY	A	B	C	D		
LPV DA	1320-½		250 (300-½)			
LNAV/ VNAV DA	1367-½		297 (300-½)		1367-¾ 297 (300-¾)	
LNAV MDA	1380-½		310 (300-½)		1380-1 310 (300-1)	
CIRCLING	1620-1 525 (600-1)	1640-1 545 (600-1)	1640-1½ 545 (600-1½)	1780-2¼ 685 (700-2¼)		

MIRL Rwy 7-25
REIL Rwys 13 and 25
HIRL Rwy 13-31

VOR RWY 13

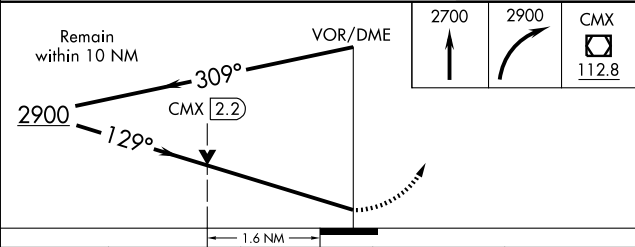
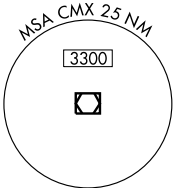
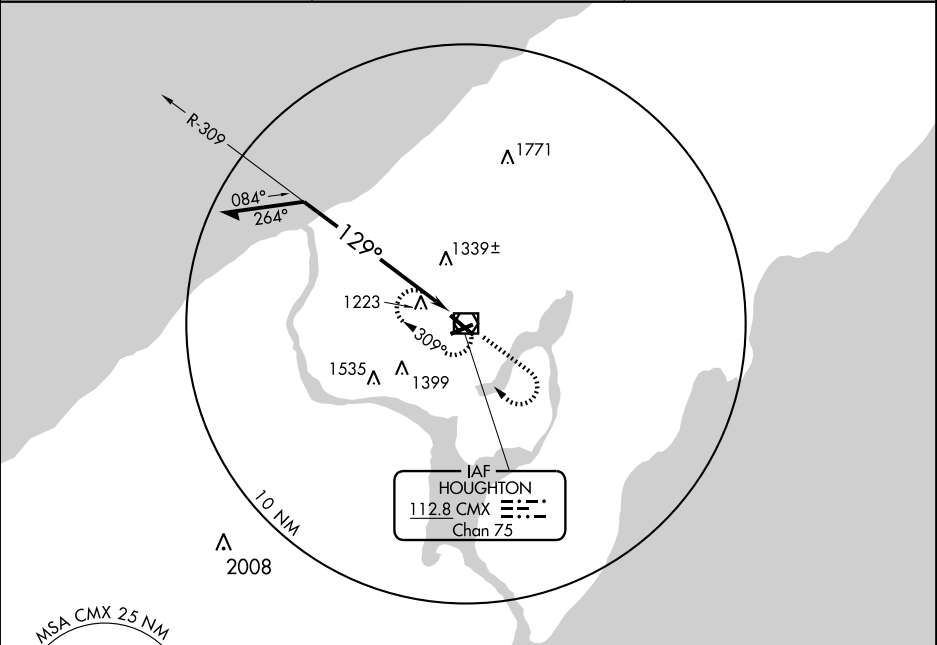
VOR/DME CMX	APP CRS	Rwy Idg	6501
112.8	129°	TDZE	1095
Chan 75		Apt Elev	1095

HANCOCK / HOUGHTON COUNTY MEMORIAL (CMX)

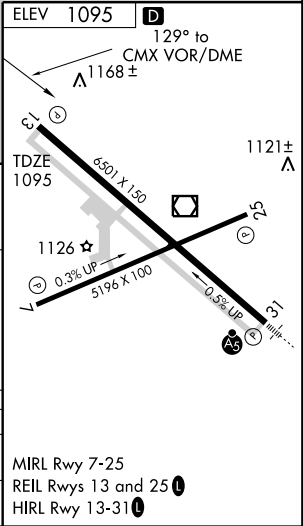


MISSED APPROACH: Climb to 2700, then climbing right turn to 2900 direct CMX VOR/DME and hold.

ASOS 125.675	MINNEAPOLIS CENTER 127.2 379.1	UNICOM 122.7 (CTAF) 0
-----------------	-----------------------------------	--------------------------



CATEGORY	A	B	C	D
S-13	1640-1	545 (600-1)	1640-1½ 545 (600-1½)	1640-1¾ 545 (600-1¾)
CIRCLING	1640-1	545 (600-1)	1640-1½ 545 (600-1½)	1700-2 605 (700-2)



MIRL Rwy 7-25
REIL Rlys 13 and 25 0
HIRL Rwy 13-31 0

VOR/DME CMX 112.8 Chgn 75	APP CRS 260°	Rwy Idg 5196 TDZE 1074 Apt Elev 1095
---	------------------------	---

VOR RWY 25

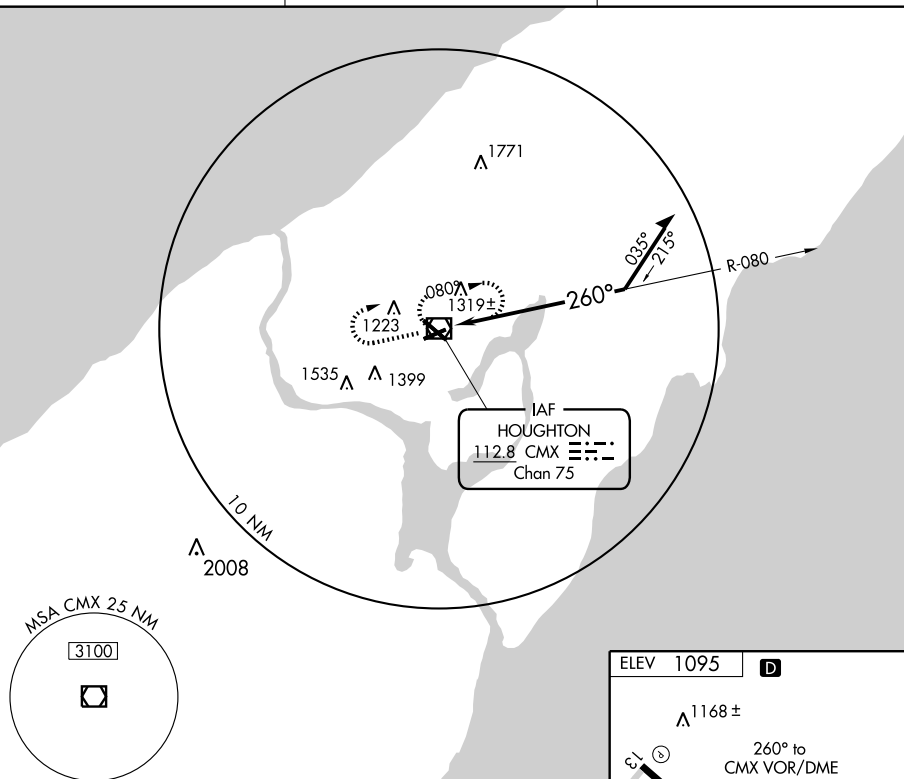
HANCOCK / HOUGHTON COUNTY MEMORIAL (CMX)






MISSED APPROACH: Climb to 3100, then right turn direct CMX VOR/DME and hold.

ASOS
125.675

MINNEAPOLIS CENTER
127.2 379.1

UNICOM
122.7 (CTAF) **L**

EC-1. 17 DEC 2009 to 14 JAN 2010

3100			CMX  112.8
------	---	---	---

VOR/DME

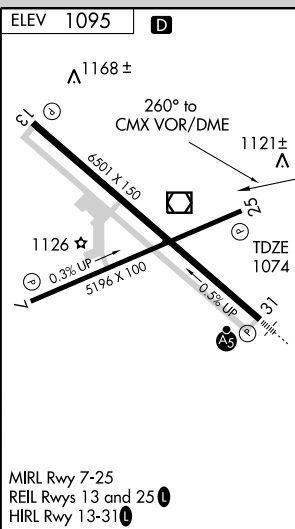
Remain within 10 NM

080°

260°

3100

CATEGORY	A	B	C	D
S-25	1620-1 546 (600-1)		1620-1½ 546 (600-1½)	1620 1¾ 546 (600-1¾)
CIRCLING	1620-1 525 (600-1)	1640-1 545 (600-1)	1640-1½ 545 (600-1½)	1780-2¼ 685 (700-2¼)



HANCOCK, MICHIGAN

AL-896 (FAA)

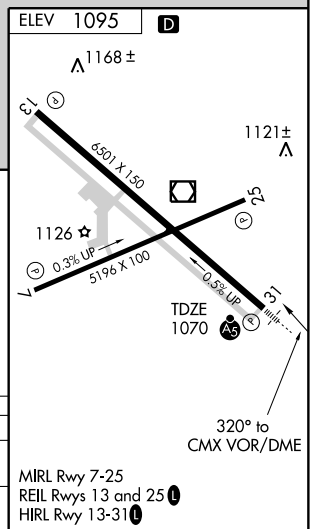
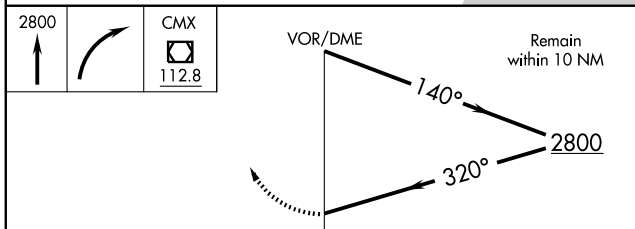
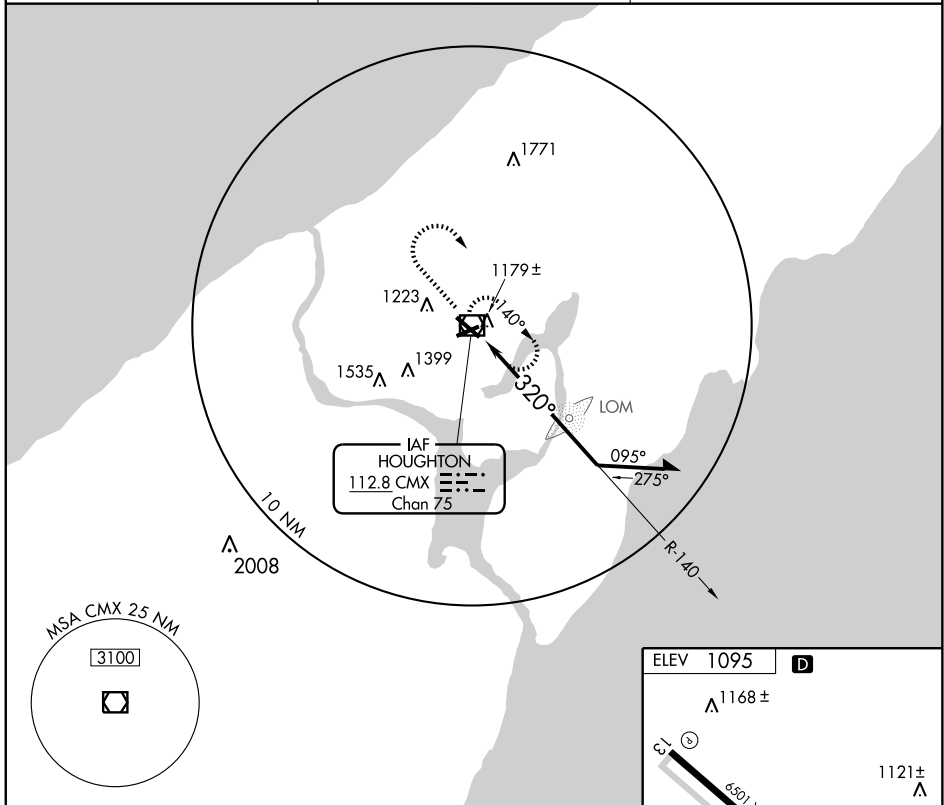
VOR/DME CMX	APP CRS	Rwy Idg	6501
112.8	320°	TDZE	1070
Chan 75		Apt Elev	1095

VOR RWY 31

HANCOCK / HOUGHTON COUNTY MEMORIAL (CMX)

<p>▼ Request MIRL Rwy 7-25 CTAF.</p>	<p>MALSR</p> 	<p>MISSED APPROACH: Climb to 2800, then right turn direct CMX VOR/DME and hold.</p>
--------------------------------------	--	---

ASOS 125.675	MINNEAPOLIS CENTER 127.2 379.1	UNICOM 122.7 (CTAF) 0
-----------------	-----------------------------------	--------------------------



CATEGORY	A	B	C	D
S-31	1500-½ 430 (500-½)		1500-¾ 430 (500-¾)	1500-1 430 (500-1)
CIRCLING	1620-1 525 (600-1)	1640-1 545 (600-1)	1640-1½ 545 (600-1½)	1780-2¼ 685 (700-2¼)

MIRL Rwy 7-25
REIL Rws 13 and 25 0
HIRL Rwy 13-31 0

EC-1.17 DEC 2009 to 14 JAN 2010

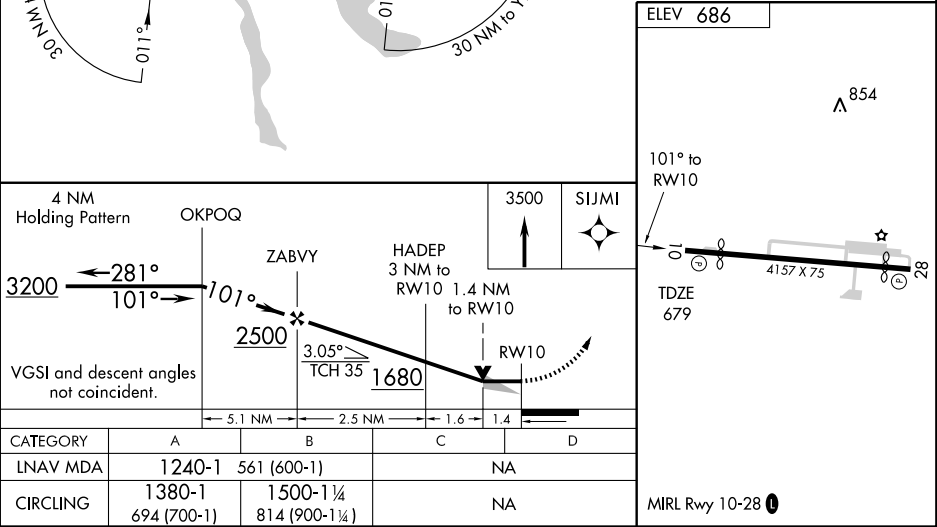
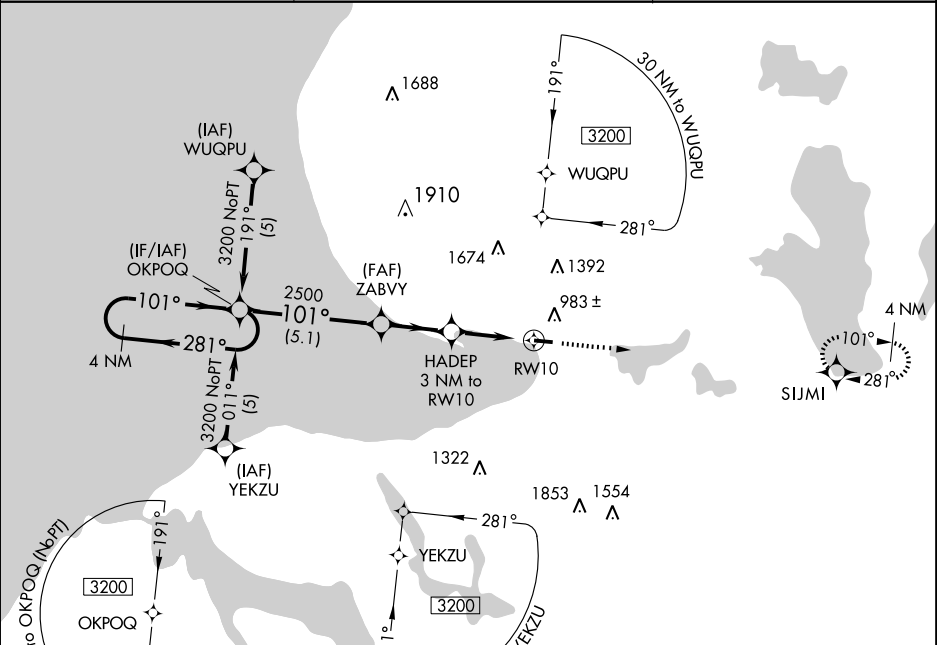
APP CRS	Rwy Idg	3712
101°	TDZE	679
	Apt Elev	686

RNAV (GPS) RWY 10

HARBOR SPRINGS (MGN)

T DME/DME RNP-0.3 NA. VDP NA when using Pellston altimeter setting. When local altimeter setting not received, use Pellston altimeter setting and increase all MDAs 40 feet.	MISSED APPROACH: Climb to 3500 direct SIJMI and hold.
---	---

AWOS-3 119.925	MINNEAPOLIS CENTER 134.6 354.05	UNICOM 122.8 (CTAF) U
-------------------	------------------------------------	---------------------------------



APP CRS	Rwy Idg	3712
281°	TDZE	686
	Apt Elev	686

RNAV (GPS) RWY 28

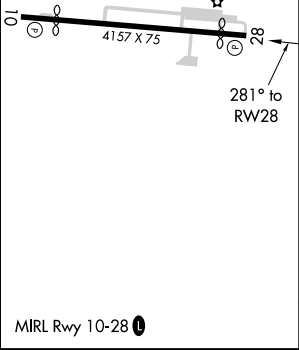
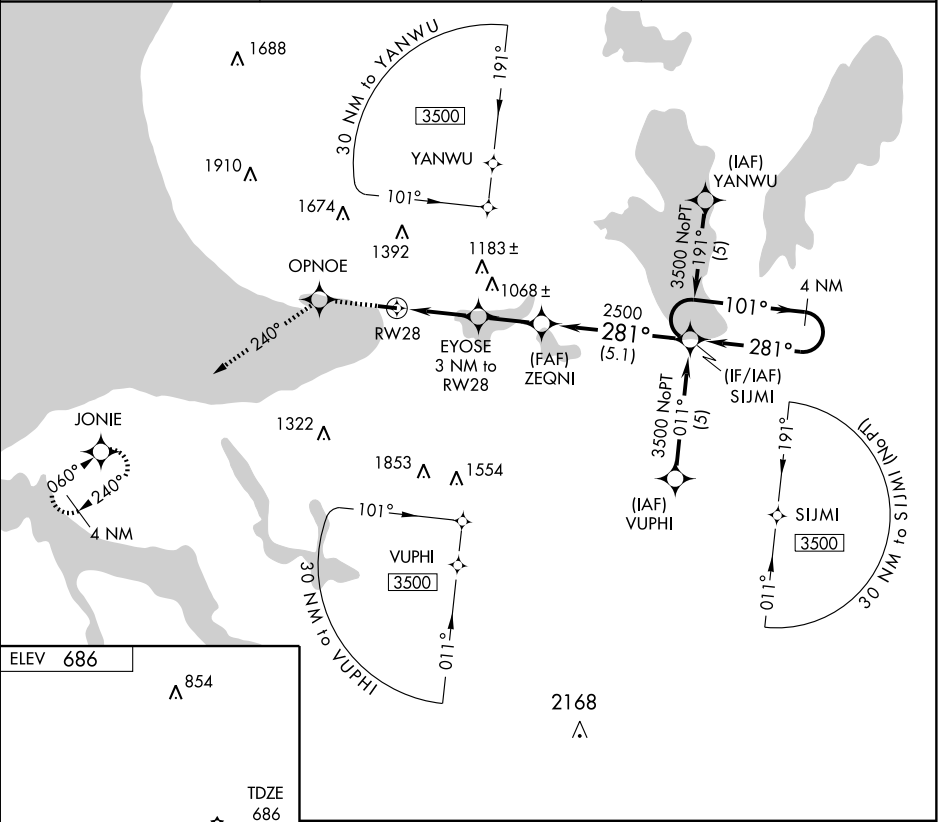
HARBOR SPRINGS (MGN)

▼ DME/DME RNP -0.3 NA. Visibility reduction by helicopters NA.

▲ When local altimeter setting not received, use Pellston altimeter setting and increase all MDAs 40 feet.

MISSED APPROACH: Climb to 3400 direct OPNOE and via 240° track to JONIE and hold.

AWOS-3 119.925	MINNEAPOLIS CENTER 134.6 354.05	UNICOM 122.8 (CTAF) 1
-------------------	------------------------------------	---------------------------------



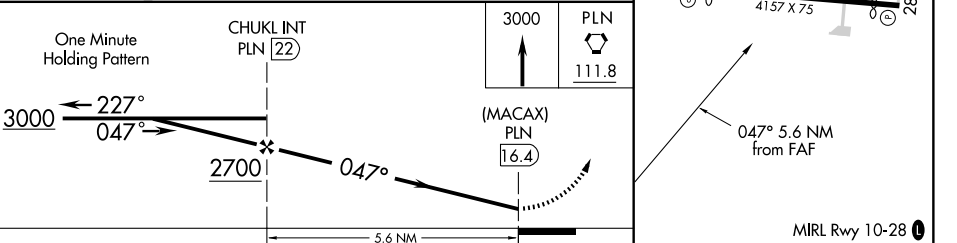
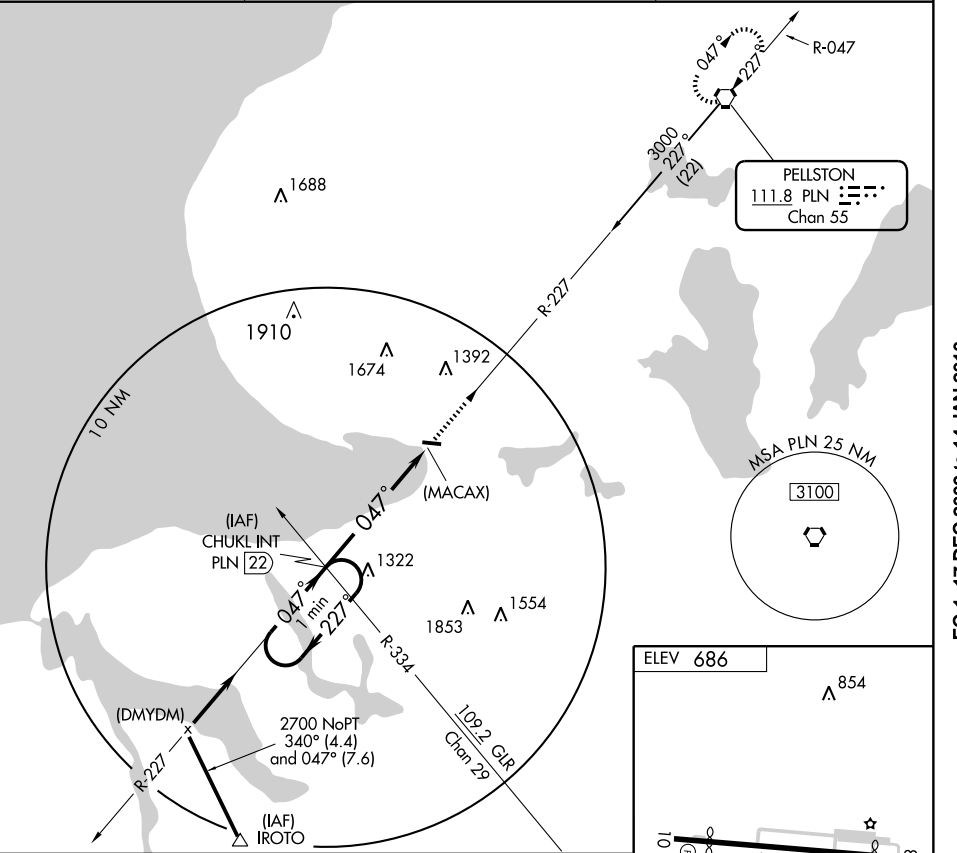
3400	OPNOE	JONIE	ZEIQNI	SIJMI	4 NM Holding Pattern
↑	TRK 224°				
	EYOSE 3 NM to RW28				
	RW28				
	1680		2500		
	3 NM	2.5 NM	5.1 NM		
CATEGORY	A	B	C	D	
LNAV MDA	1120-1	434 (500-1)			NA
CIRCLING	1380-1 694 (700-1)	1500-1½ 814 (900-1½)			NA

Use Pellston altimeter setting.

Procedure not authorized at night.

MISSED APPROACH: Climb to 3000 direct PLN VORTAC and hold.

AWOS-3 119.925	MINNEAPOLIS CENTER 134.6 354.05	UNICOM 122.8 (CTAF)
--------------------------	---	-------------------------------



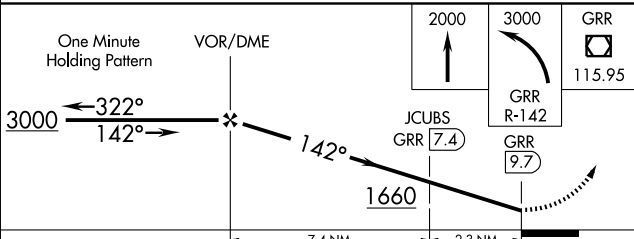
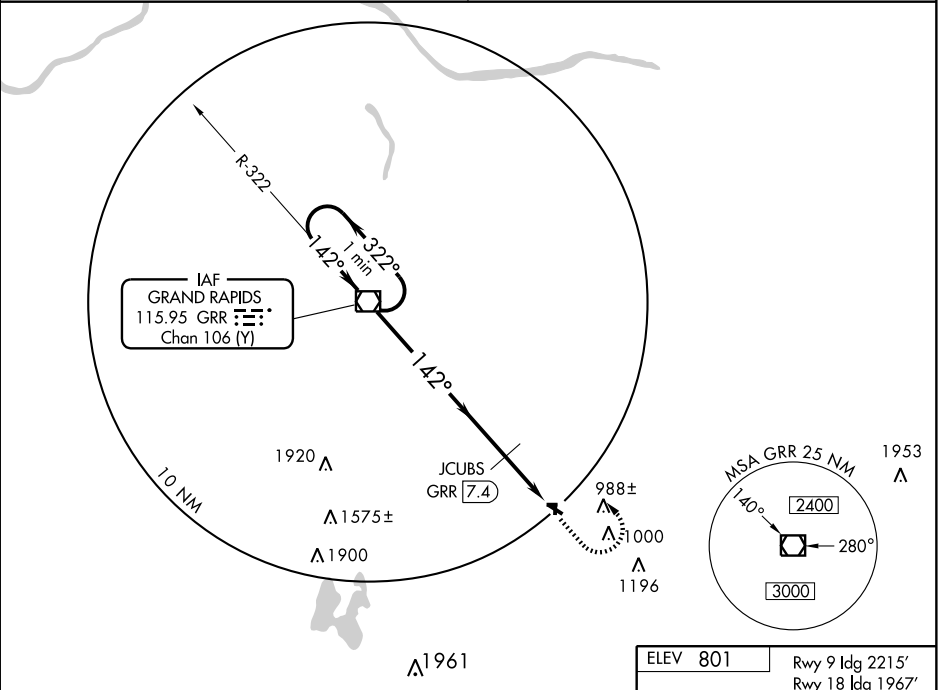
CATEGORY	A	B	C	D	FAF to MAP 5.6 NM					
CIRCLING	1660-1¼ 968 (1000-1¼)	1660-1½ 968 (1000-1½)	NA		Knots	60	90	120	150	180
					Min:Sec	5:36	3:44	2:48	2:14	1:52

EC-1.17 DEC 2009 to 14 JAN 2010

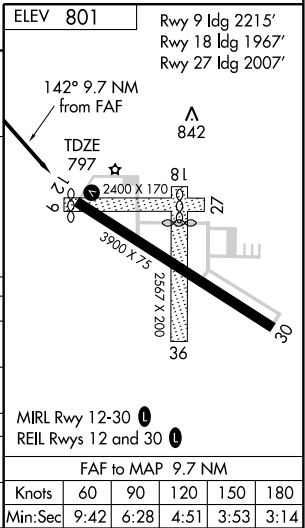
VOR RWY 12
HASTINGS (9D9)

VOR/DME GRR 115.95 Chan 106 (Y)	APP CRS 142°	Rwy Idg TDZE Apt Elev	3900 797 801
---------------------------------------	-----------------	-----------------------------	--------------------

<div><div><div>▼</div><div>▲ NA</div></div><div>Use Grand Rapids altimeter setting.</div></div>	MISSED APPROACH: Climb to 2000, then climbing left turn to 3000 via GRR R-142 to GRR VOR/DME and hold.
GRAND RAPIDS APP CON ★ 128.4 257.6	UNICOM 123.075 (CTAF) 0



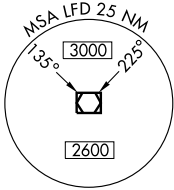
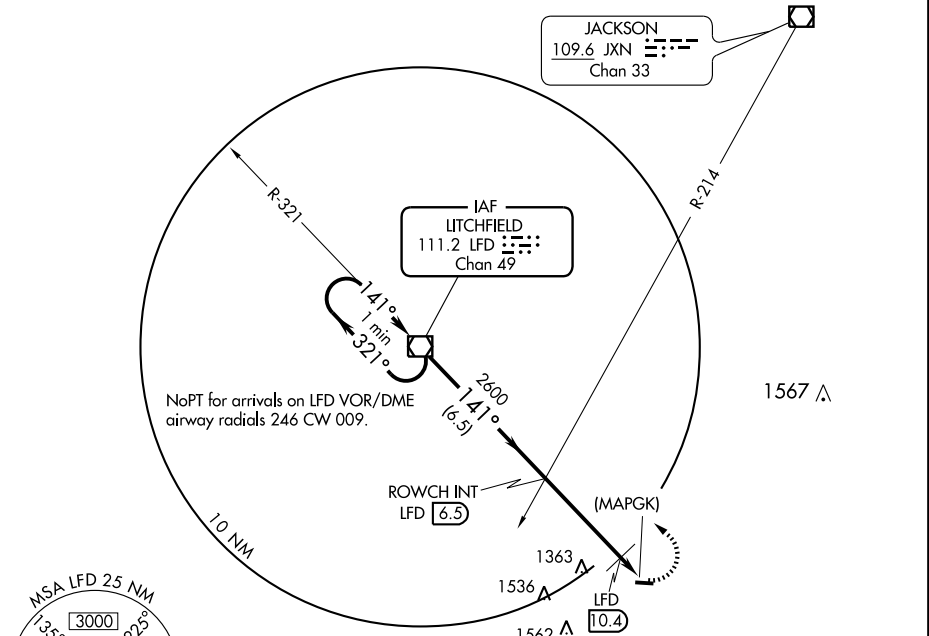
CATEGORY	A	B	C	D
S-12	1660-1 863 (900-1)	1660-1¼ 863 (900-1¼)	1660-2½ 863 (900-2½)	NA
CIRCLING	1660-1 859 (900-1)	1660-1¼ 859 (900-1¼)	1660-2½ 859 (900-2½)	NA
JCUBS DME MINIMUMS				
S-12	1340-1	543 (600-1)	1340-1½ 543 (600-1½)	NA
CIRCLING	1340-1	539 (600-1)	1340-1½ 539 (600-1½)	NA



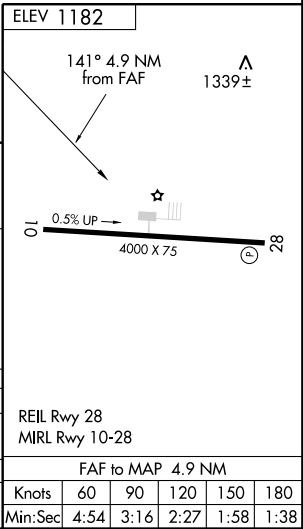
VOR/DME LFD 111.2 Chan 49	APP CRS 141°	Rwy Idg TDZE Apt Elev N/A N/A 1182
---	------------------------	--

MISSED APPROACH: Climbing left turn
to 2600 direct LFD VOR/DME and hold.

AWOS-3 121.025	TOLEDO APP CON 134.35 317.55	UNICOM 122.8 (CTAF)
--------------------------	--	-------------------------------



One Minute Holding Pattern				
VOR/DME				
ROWCH INT LFD 6.5				
LFD 10.4 (MAPGK) LFD 11.4				
1720				
6.5 NM 3.9 NM 1 NM				
CATEGORY	A	B	C	D
CIRCLING	1720-1	538 (600-1)	1720-1½ 538 (600-1½)	NA
DME MINIMUMS				
CIRCLING	1640-1	458 (500-1)	1640-1½ 458 (500-1½)	NA



LOC/DME I-BIV 110.55 Chan 42 (Y)	APP CRS 264°	Rwy Idg 6002 TDZE 686 Apt Elev 698
--	------------------------	---

ILS or LOC/DME RWY 26

HOLLAND/ TULIP CITY (BIV)

NA For inoperative MALSRS, increase all S-ILS 26 visibility to 1. When local altimeter setting not received, use Muskegon altimeter setting and increase all DA 71 feet, all MDA 80 feet and S-ILS 26 Cats visibility $\frac{1}{4}$ mile, and S-LOC 26 Cat C visibility $\frac{1}{4}$ mile. For inoperative MALSRS when using Muskegon altimeter setting, increase S-ILS 26 all Cats visibility to $\frac{1}{4}$. VDP NA when using Muskegon altimeter setting.

MALSR



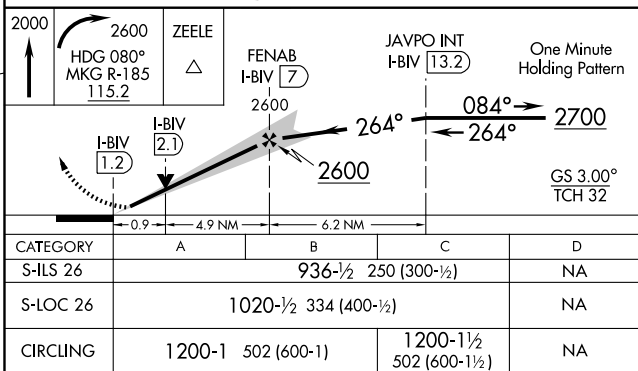
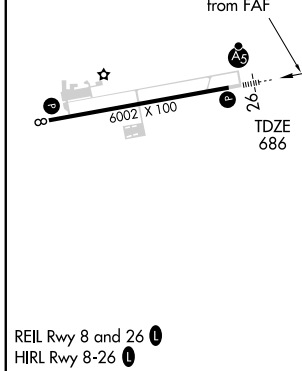
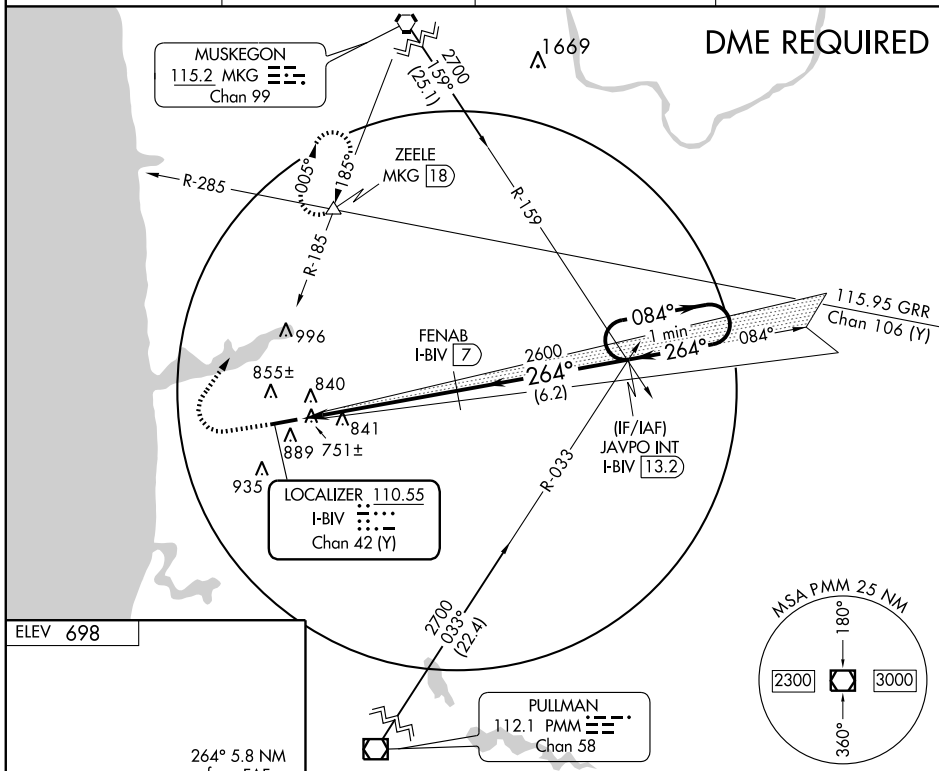
MISSED APPROACH: Climb to 2000 then climbing right turn to 2600 via heading 080° and MKG R-185 to ZEELE INT/MKG 18 DME and hold.

ASOS
119.025

MUSKEGON APP CON★
119.8 339.1

MUSKEGON CLNC DEL
123.95

UNICOM
123.05 (CTAF) **L**



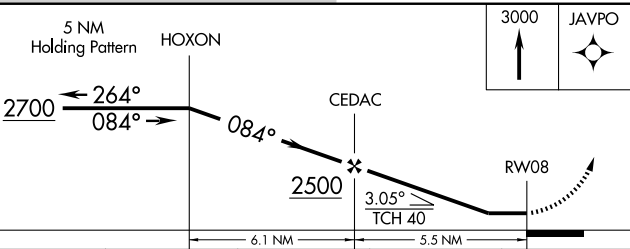
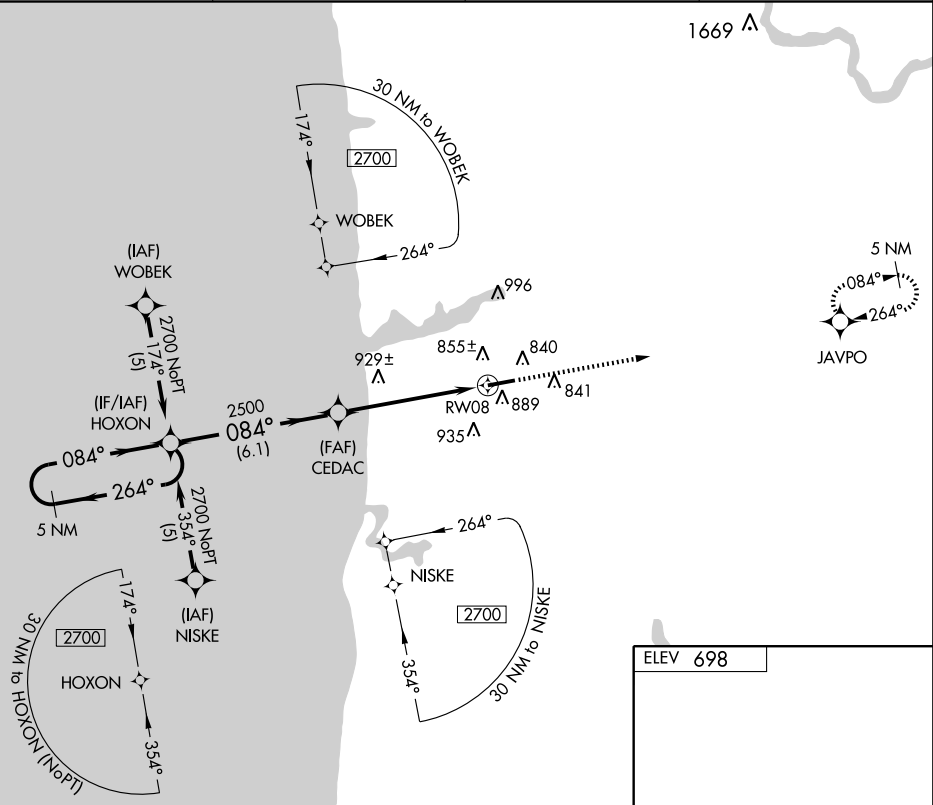
RNAV (GPS) RWY 8

HOLLAND/ TULIP CITY (BIV)

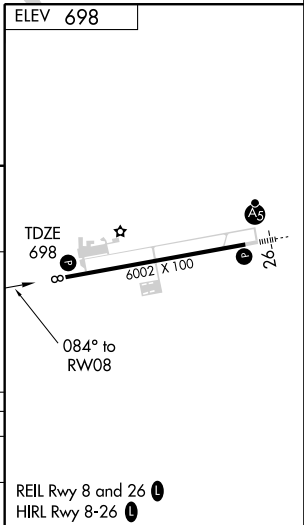
APP CRS	Rwy Idg	6002
084°	TDZE	698
	Apt Elev	698

<div>▼</div> <div>▲</div>	Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA. If local altimeter setting not received, use Muskegon County altimeter setting and increase all MDAs 80 feet.	MISSED APPROACH: Climb to 3000 direct JAVPO and hold.
---------------------------	--	---

ASOS 119.025	MUSKEGON APP CON ★ 119.8 339.1	MUSKEGON CLNC DEL 123.95	UNICOM 123.05 (CTAF) 0
-----------------	-----------------------------------	-----------------------------	---------------------------



CATEGORY	A	B	C	D
RNAV MDA	1180-1	482 (500-1)	1180-1½ 482 (500-1½)	1180-1½ 482 (500-1½)
CIRCLING	1200-1	502 (600-1)	1200-1½ 502 (600-1½)	1260-2 562 (600-2)



HOLLAND/ TULIP CITY (BIV)

MISSED APPROACH:
Climb to 2700 direct
HOXON and hold.

123.05 (CTAF) **L**[illegible]

EC-1. 17 DEC 2009 to 14 JAN 2010

VOR/DME PMM 112.1 Chan 58	APP CRS 360°	Rwy Idg TDZE Apt Elev	N/A N/A 688
---	------------------------	-----------------------------	--

VOR-A

HOLLAND/ TULIP CITY (BIV)

T
A NA

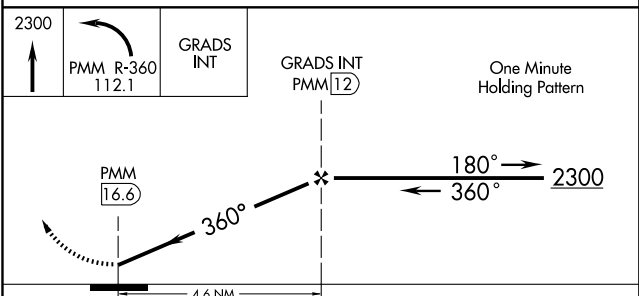
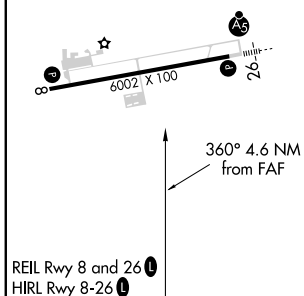
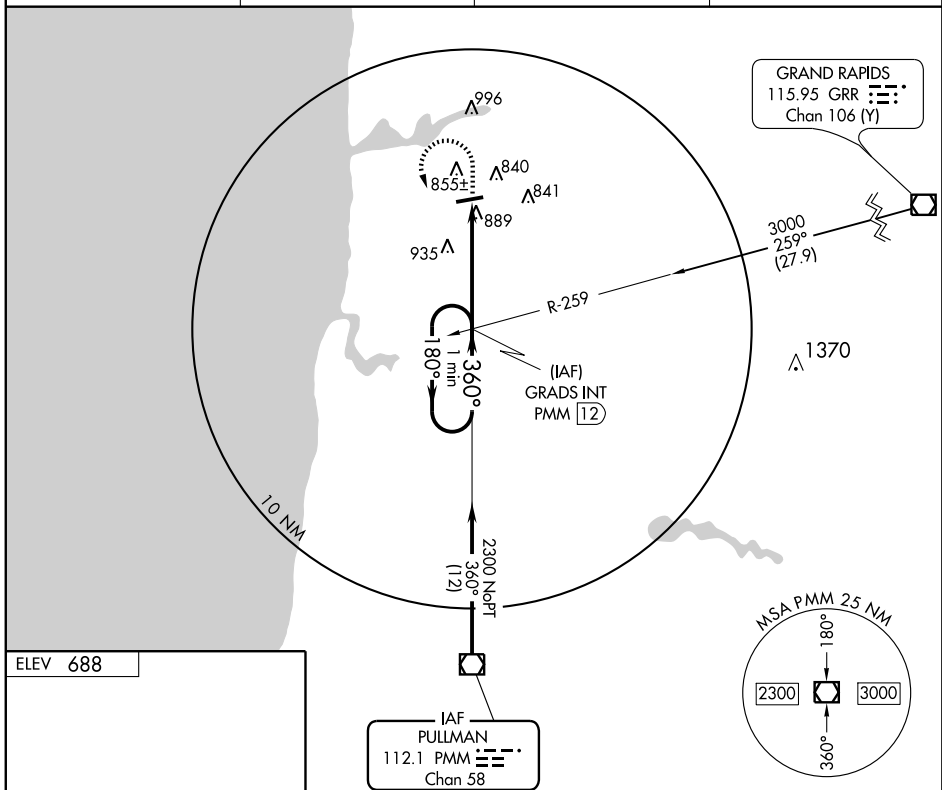
MISSED APPROACH: Climb to 2300 then left turn via PMM R-360 to GRADS INT/PMM 12 DME and hold.

ASOS
119.025

MUSKEGON APP CON★
119.8 339.1

MUSKEGON CLNC DEL
123.95

UNICOM
123.05 (CTAF) **L**



FAF to MAP 4.6 NM						CATEGORY	A		B		C	D
Knots	60	90	120	150	180	CIRCLING	1200-1		512 (600-1)		1200-1½	1240-2
Min:Sec	4:36	3:04	2:18	1:50	1:32						512 (600-1½)	552 (600-2)

APP CRS	Rwy Idg	4000
094°	TDZE	1150
	Apt Elev	1150

RNAV (GPS) RWY 9

HOUGHTON LAKE/ROSCOMMON COUNTY-BLODGETT MEMORIAL (HTL)

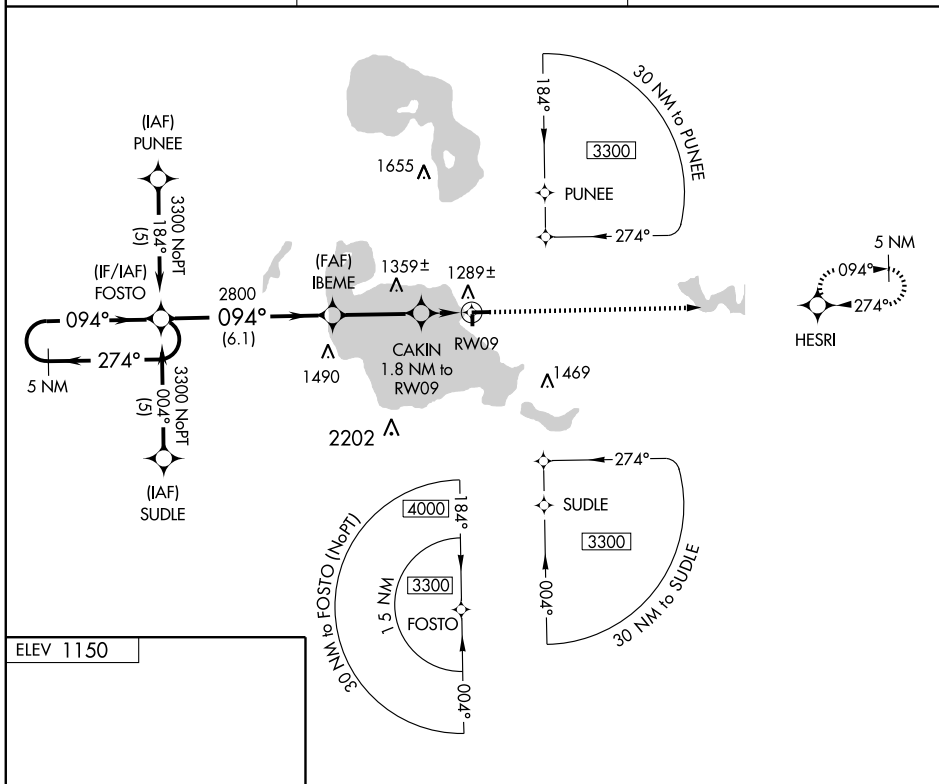
T DME/DME RNP-0.3 NA. Circling NA at night.
 Visibility reduction by helicopters NA.

A If local altimeter setting not received, use Gaylord altimeter setting and increase all MDAs 120 feet.

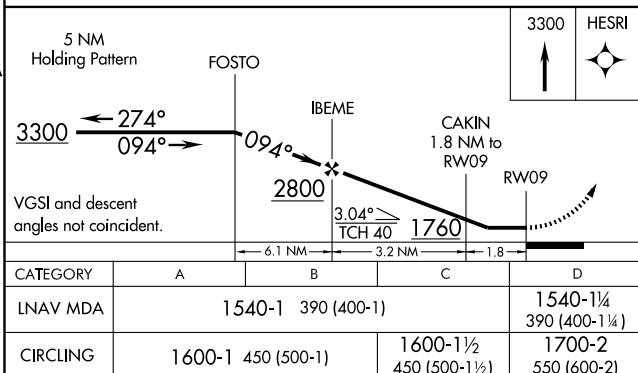
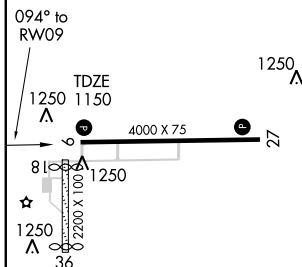
MISSED APPROACH: Climb to 3300 direct HESRI and hold.

ASOS
111.6

MINNEAPOLIS CENTER
132.9 398.9

UNICOM
122.8 (CTAF) **L**

ELEV 1150



APP CRS	Rwy Idg	4000
274°	TDZE	1145
	Apt Elev	1150

HOUGHTON LAKE/

RNAV (GPS) RWY 27

ROSCOMMON COUNTY-BLODGETT MEMORIAL (HTL)

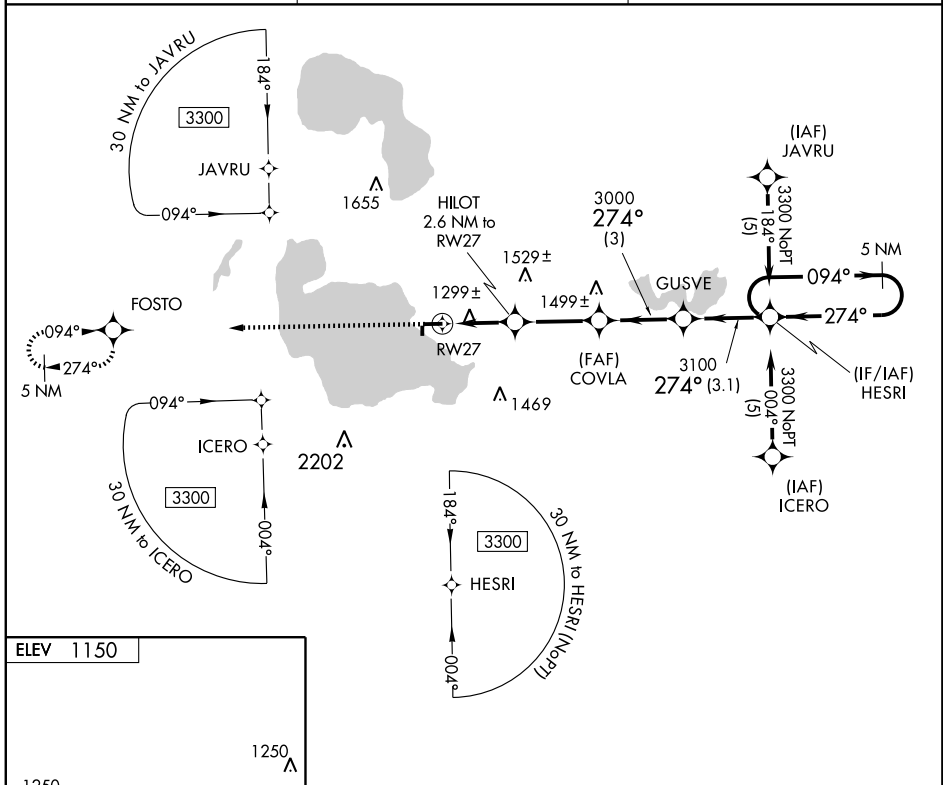


DME/DME RNP-0.3 NA. Circling NA at night.
 Visibility reduction by helicopters NA.
 If local altimeter setting not received, use Gaylord
 altimeter setting and increase all MDAs 120 feet.

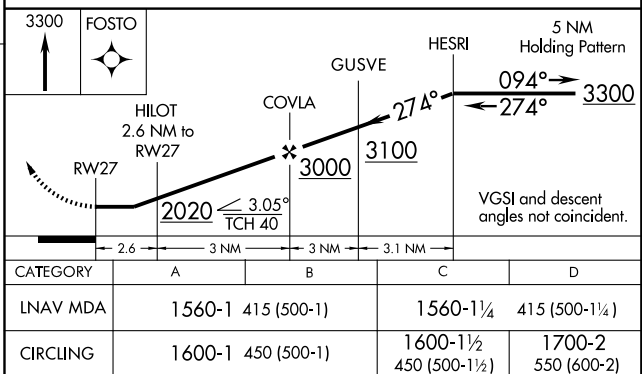
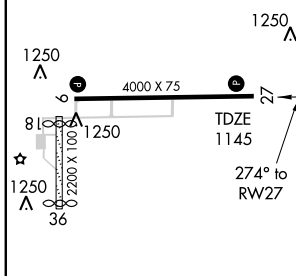
MISSED APPROACH: Climb to 3300 direct FOSTO and hold.

ASOS
111.6

MINNEAPOLIS CENTER
132.9 398.9

UNICOM
122.8 (CTAF) **L**

ELEV	1150
------	------



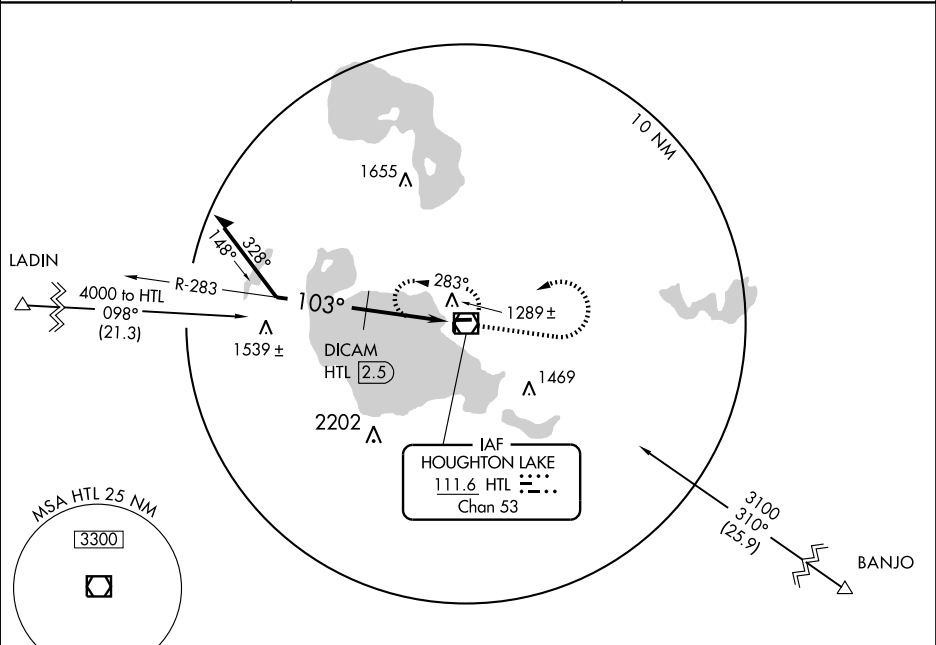
HIRL Rwy 9-27 **L**
REIL Rwy 9 and 27 **L**

VOR/DME HTL	APP CRS	Rwy Idg	4000
111.6	103°	TDZE	1150
Chan 53		Apt Elev	1150

HOUGHTON LAKE/
ROSCOMMON COUNTY-BLODGETT MEMORIAL (HTL)

<p>▼ If local altimeter setting not received, procedure NA. ▲ NA Visibility reduction by helicopters NA. Circling NA at night.</p>	<p>MISSED APPROACH: Climb to 2000 then climbing left turn to 3000 direct HTL VOR/DME and hold.</p>
--	--

ASOS 111.6	MINNEAPOLIS CENTER 132.9 398.9	UNICOM 122.8 (CTAF) 1
---------------	-----------------------------------	--------------------------



Remain within 10 NM

6000 VOR/DME

2800 283°

DICAM HTL 2.5

1840 103°

3.06°

TCH 32

2 NM

VGSI and descent angles not coincident.

CATEGORY	A	B	C	D
S-9	1840-1 690 (700-1)		1840-2 690 (700-2)	1840-2¼ 690 (700-2¼)
CIRCLING	1840-1 690 (700-1)		1840-2 690 (700-2)	1840-2¼ 690 (700-2¼)
DICAM FIX MINIMUMS (DME REQUIRED)				
S-9	1540-1 390 (400-1)			1540-1¼ 390 (400-1¼)
CIRCLING	1600-1 450 (500-1)		1600-1½ 450 (500-1½)	1700-2 550 (600-2)

ELEV 1150

103° to HTL VOR/DME

1250 TDZE 1150

4000 X 75

1250

810 6

1250 36

2200 X 100

HIRL Rwy 9-27

REIL Rws 9 and 27

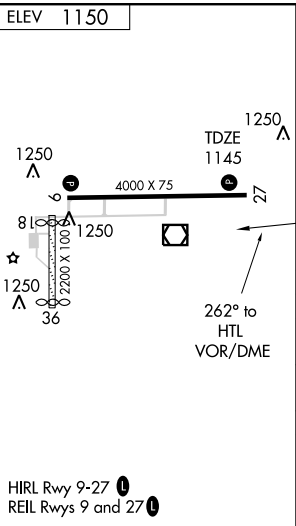
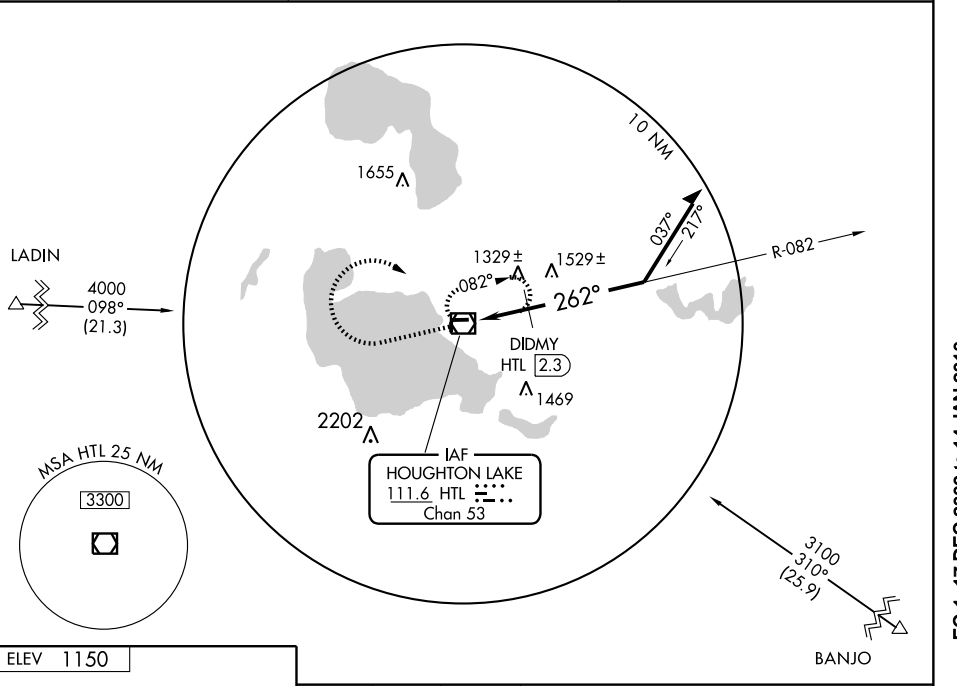
▼

NA

If local altimeter setting not received, procedure NA.
Visibility reduction by helicopters NA.
Circling NA at night.

MISSED APPROACH: Climb to 2000 then climbing right turn to 3000 direct HTL VOR/DME and hold.

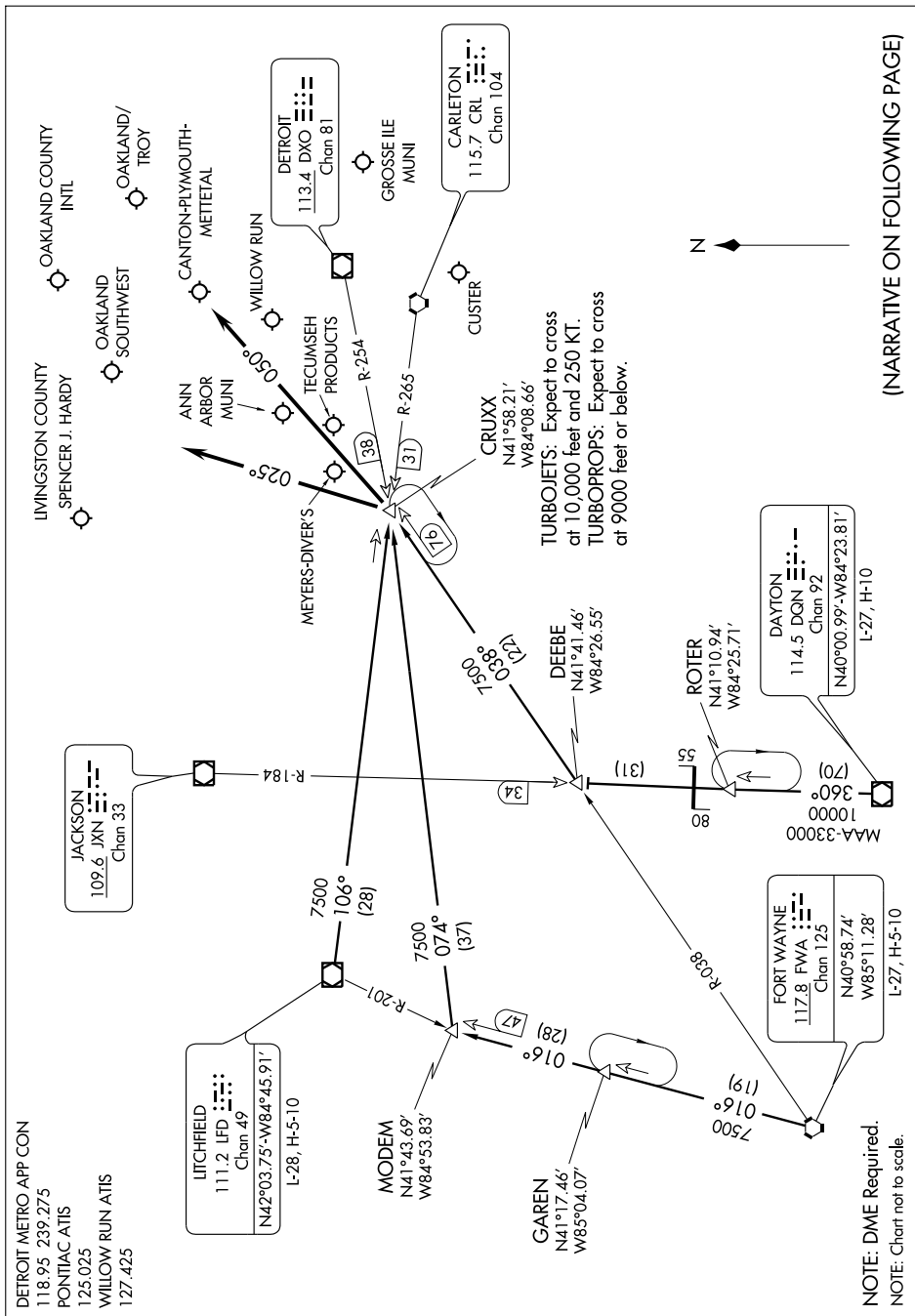
ASOS 111.6	MINNEAPOLIS CENTER 132.9 398.9	UNICOM 122.8 (CTAF) 1
---------------	-----------------------------------	--------------------------



CATEGORY	A	B	C	D
S-27	1840-1 695 (700-1)		1840-2 695 (700-2)	1840-2 1/4 695 (700-2 1/4)
CIRCLING	1840-1 690 (700-1)		1840-2 690 (700-2)	1840-2 1/4 690 (700-2 1/4)
DIDMY FIX MINIMUMS (DME REQUIRED)				
S-27	1580-1 435 (500-1)		1580-1 1/4 435 (500-1 1/4)	1580-1 1/2 435 (500-1 1/2)
CIRCLING	1600-1 450 (500-1)		1600-1 1/2 450 (500-1 1/2)	1700-2 550 (600-2)

CRUXX FOUR ARRIVAL

DETROIT, MICHIGAN



ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUXX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUXX INT. Thence

FORT WAYNE TRANSITION (FWA.CRUXX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUXX INT. Thence

LITCHFIELD TRANSITION (LFD.CRUXX4): From over LFD VORTAC via LFD R-106 to CRUXX INT. Thence

. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUXX INT via 025° heading.

. . . . Aircraft landing YIP or ARB: From over CRUXX INT via 050° heading.
Expect radar vector to final approach course.

▼

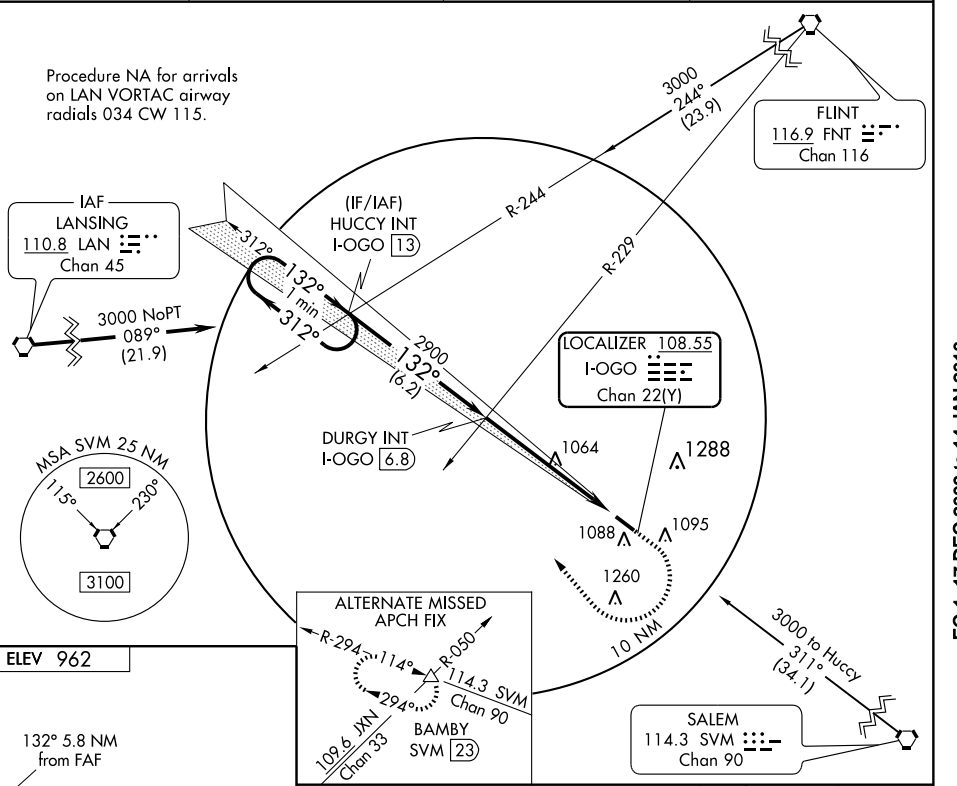
▲ NA

If local altimeter setting not received, use Bishop Intl altimeter setting and increase all DAs/MDAs 80 feet.

MALSR

MISSED APPROACH: Climb to 1600 then climbing right turn to 3000 via heading 356° and I-OGO NW course to HUCCY Int/I-OGO 13 DME and hold.

AWOS-3 118.875	DETROIT APP CON 127.5 363.2	CLNC DEL 121.725 (GCO)	UNICOM 123.0 (CTAF) 0
-------------------	--------------------------------	---------------------------	--------------------------



HIRL Rwy 13-31
REIL Rwy 13 and 31

FAF to MAP 5.8 NM

Knots	60	90	120	150	180
Min:Sec	5:48	3:52	2:54	2:19	1:56

One Minute Holding Pattern

HUCCY INT I-OGO 13

3000 ← 312° 132° → 2900

GS 3.00° TCH 48

6.2 NM 4.8 NM 1 NM

DURGY INT I-OGO 6.8

1600 3000

HUCCY INT I-OGO 13

HDG 356° I-OGO NW CRS

I-OGO 2 I-OGO 1

CATEGORY	A	B	C	D
S-ILS 13	1162-1/2 200 (200-1/2)			
S-LOC 13	1320-1/2 358 (400-1/2)			1320-3/4 358 (400-3/4)
CIRCLING	1460-1 498 (500-1)		1460-1 1/2 498 (500-1 1/2)	1520-2 558 (600-2)

EC-1, 17 DEC 2009 to 14 JAN 2010

NDB RWY 13

HOWELL / LIVINGSTON COUNTY SPENCER J. HARDY (OZW)

NDB OZW	APP CRS	Rwy Idg
<u>243</u>	<u>119°</u>	5002
		TDZE
		962
		Apt Elev
		962

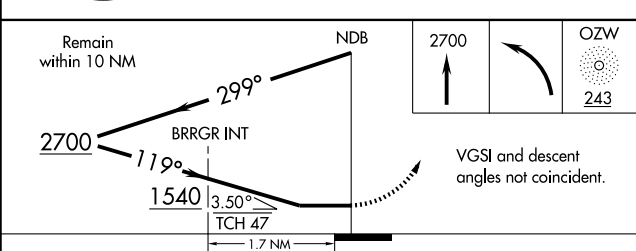
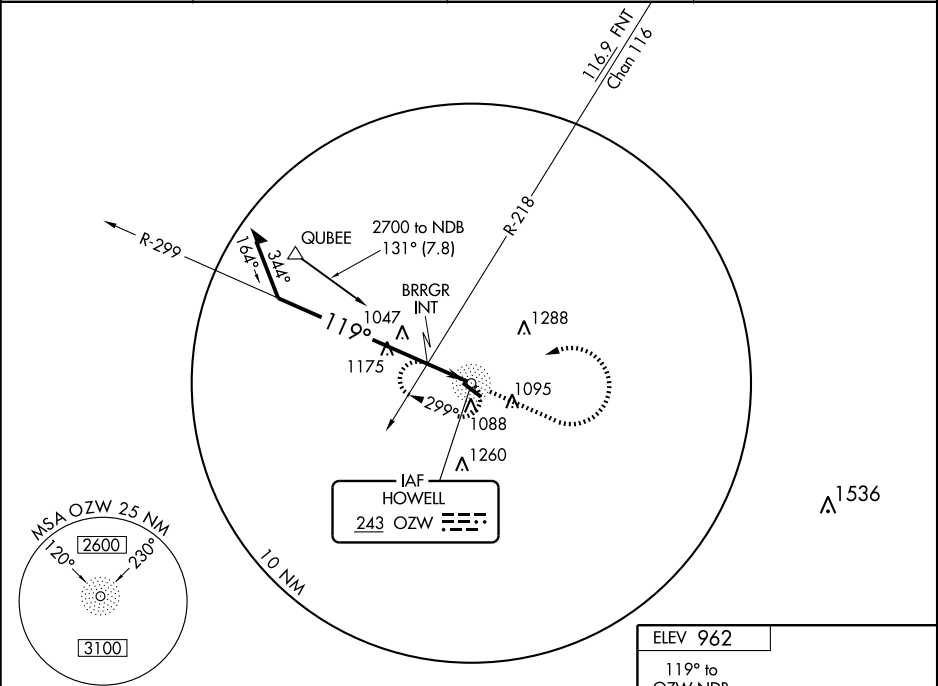
▽ If local altimeter setting not received, use Bishop Intl altimeter setting and increase all MDAs 80 feet. Visibility reduction by helicopters NA. BRRGR FIX minimums NA when using Bishop Intl altimeter setting.

▲ NA

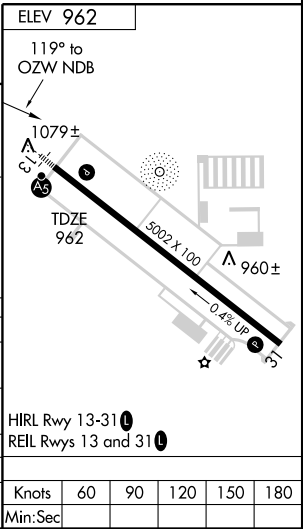
MALSR

MISSED APPROACH: Climb to 2700 then left turn direct OZW NDB and hold.

AWOS-3 118.875	DETROIT APP CON 127.5 363.2	CLNC DEL 121.725 (GCO)	UNICOM 123.0 (CTAF) 0
--------------------------	---------------------------------------	----------------------------------	---------------------------------



CATEGORY	A	B	C	D
S-13	1540-1	578 (600-1)	1540-1½ 578 (600-1½)	1540-1¾ 578 (600-1¾)
CIRCLING	1540-1	578 (600-1)	1540-1½ 578 (600-1½)	1540-2 578 (600-2)
BRRGR FIX MINIMUMS				
S-13	1380-1	418 (500-1)	1380-1¼ 418 (500-1¼)	
CIRCLING	1460-1	498 (500-1)	1460-1½ 498 (500-1½)	1520-2 558 (600-2)

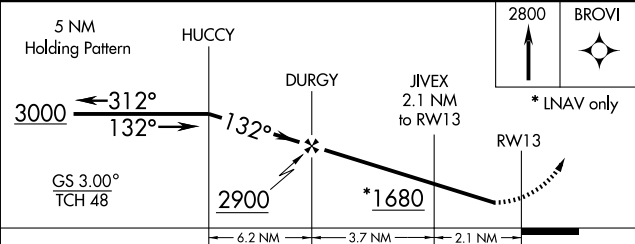
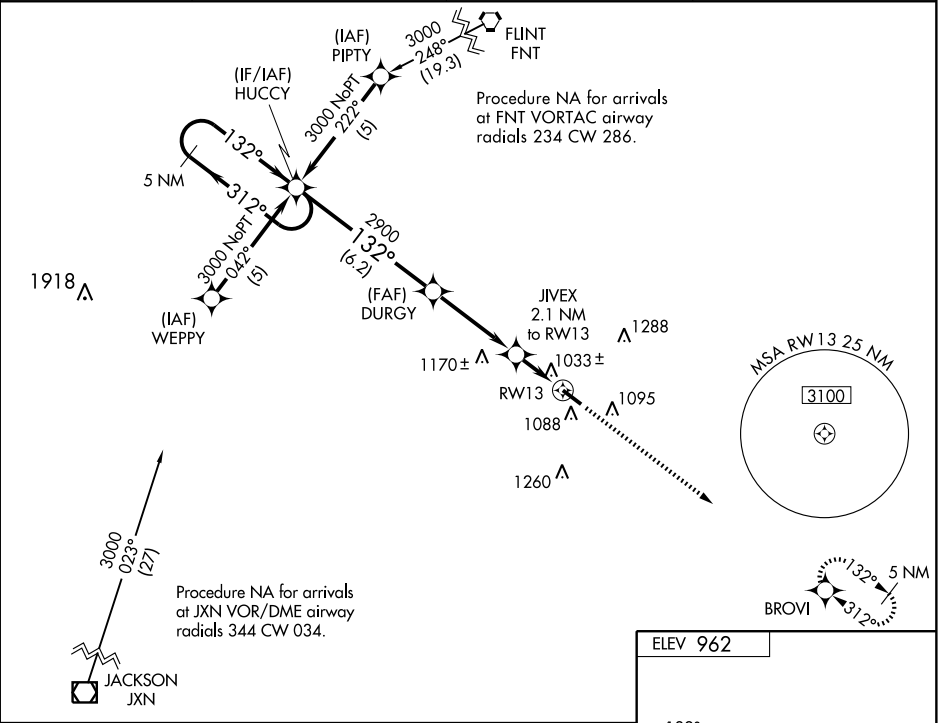


WAAS CH 69601 W13A	APP CRS 132°	Rwy Idg TDZE Apt Elev	5002 962 962
--	------------------------	-----------------------------	---

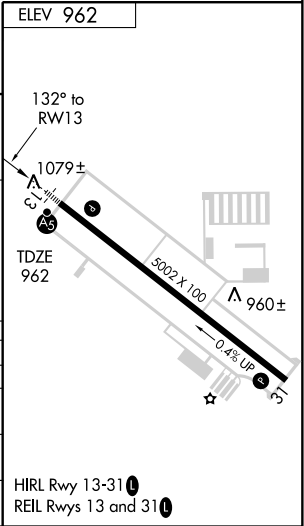
RNAV (GPS) RWY 13

HOWELL / LIVINGSTON COUNTY SPENCER J. HARDY (OZW)

<div><div><div>▼</div><div>▲</div></div><div>DME/DME RNP-0.3 NA. If local altimeter setting not received, use Bishop Intl altimeter setting and increase all DAs/MDAs 80 feet. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (117°F). Visibility reduction by helicopters NA. Baro-VNAV NA when using Bishop Intl altimeter setting.</div></div>	<div>MALSR</div> <div><div>A5</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div></div></div>
--	--



CATEGORY	A	B	C	D
LPV DA		1244-1	282 (300-1)	
LNAV/VNAV DA		1324-1¼	362 (400-1¼)	
LNAV MDA		1300-1	338 (400-1)	
CIRCLING	1460-1¼ 498 (500-1¼)		1460-1½ 498 (500-1½)	1520-2 558 (600-2)



APP CRS	Rwy Idg	5002
312°	TDZE	943
	Apt Elev	962

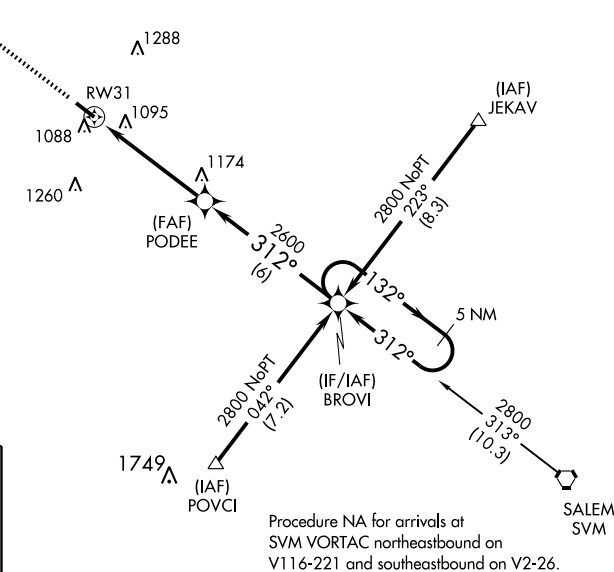
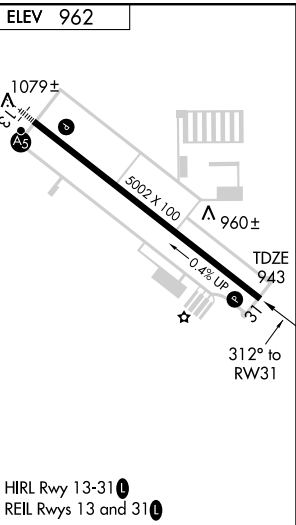
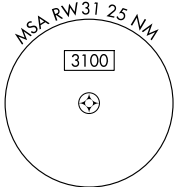
RNAV (GPS) RWY 31

HOWELL / LIVINGSTON COUNTY SPENCER J. HARDY (OZW)

▼ DME/DME RNP-0.3 NA. If local altimeter setting not received, use Bishop Intl altimeter setting and increase all MDAs 80 feet.

MISSED APPROACH: Climb to 3000 direct HUCCY and hold.

AWOS-3 118.875	DETROIT APP CON 127.5 363.2	CLNC DEL 121.725 (GCO)	UNICOM 123.0 (CTAF) 0
-------------------	--------------------------------	---------------------------	---------------------------------



Procedure NA for arrivals at SVM VORTAC northeastbound on V116-221 and southeastbound on V2-26.

3000

HUCCY

1.3 NM to RW31

PODEE

BROVI

5 NM Holding Pattern

132°

312°

2800

3.04°

TCH 45

6 NM

VGSI and descent angles not coincident.

CATEGORY	A	B	C	D
LNAV MDA	1400-1	457 (500-1)	1400-1¼ 457 (500-1¼)	1400-1½ 457 (500-1½)
CIRCLING	1460-1	498 (500-1)	1460-1½ 498 (500-1½)	1520-2 558 (600-2)

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON

127.5 239.275

WILLOW RUN ATIS 127.425

PONTIAC ATIS 125.025

COLEMAN A. YOUNG ATIS 124.875

WINDSOR ATIS 134.5

SELFREDGE ATIS 125.325 270.1

SPRTN

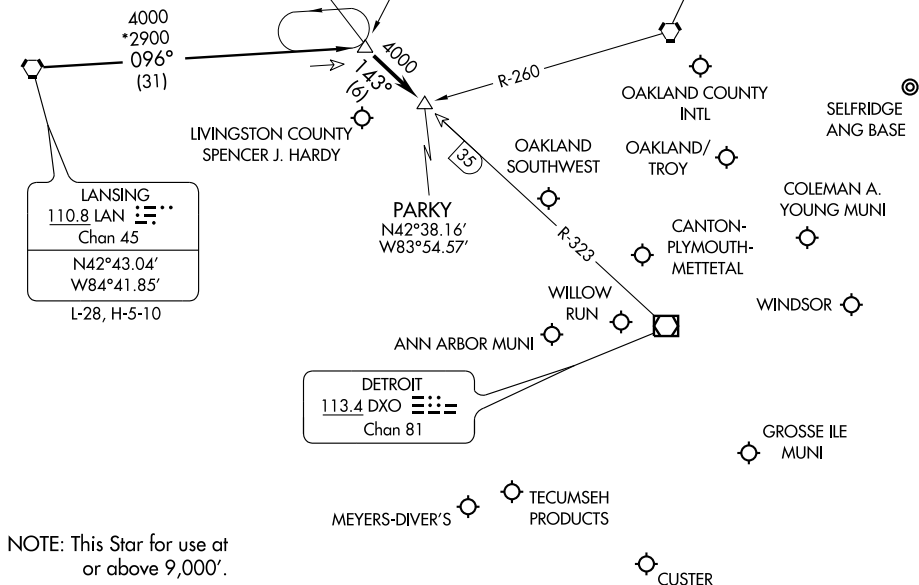
N42°42.52'-W84°00.23'

VERTICAL NAVIGATION

PLANNING INFORMATION

TURBOJETS/TURBOPROPS:

Expect clearance to cross at 9000'.



NOTE: This Star for use at
or above 9,000'.

NOTE: Chart not to scale.

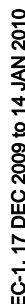
LANSGING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096
to SPRTN INT. Thence

. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ,

1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323
to PARKY INT. Thence

. . . . Expect radar vectors to final approach course.




PONTIAC, MICHIGAN

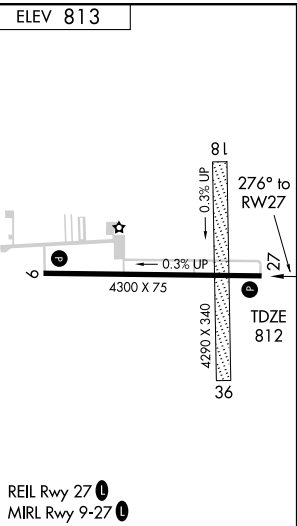
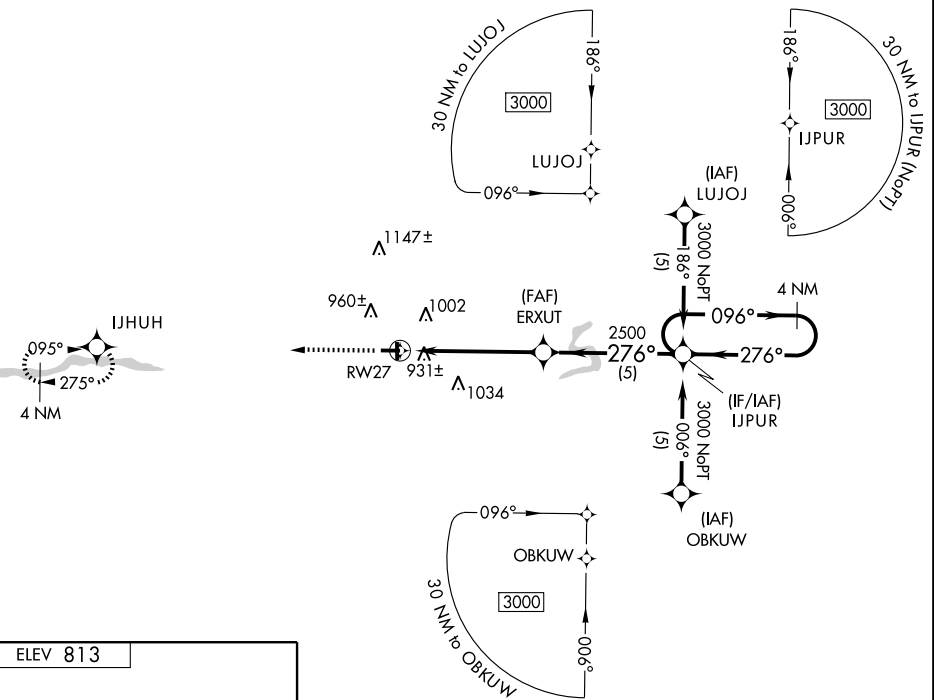


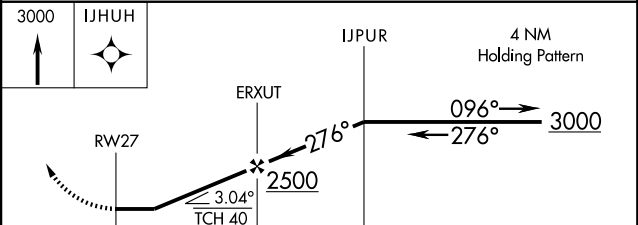
NOTE: RADAR Required.
NOTE: Chart not to scale.

APP CRS	Rwy Idg	4300
276°	TDZE	812
	Apt Elev	813

RNAV (GPS) RWY 27
IONIA COUNTY (Y70)

 Use Lansing altimeter setting.  DME/DME RNP-0.3 NA. GPS or RNP-0.3 required.	MISSED APPROACH: Climb to 3000 direct IJHUH WP and hold.
LANSING APP CON 118.65 226.4	UNICOM 122.8 (CTAF) 



				
CATEGORY	A	B	C	D
LNAV MDA	1260 - 1	448 (500-1)	1260 - 1¼ 448 (500-1¼)	NA
CIRCLING	1380 - 1	567 (600-1)	1380 - 1½ 567 (600-1½)	NA

VORTAC LAN 110.8 Chan 45	APP CRS 315°	Rwy Idg TDZE Apt Elev N/A N/A 818
--	------------------------	---

VOR-A
IONIA COUNTY (Y70)

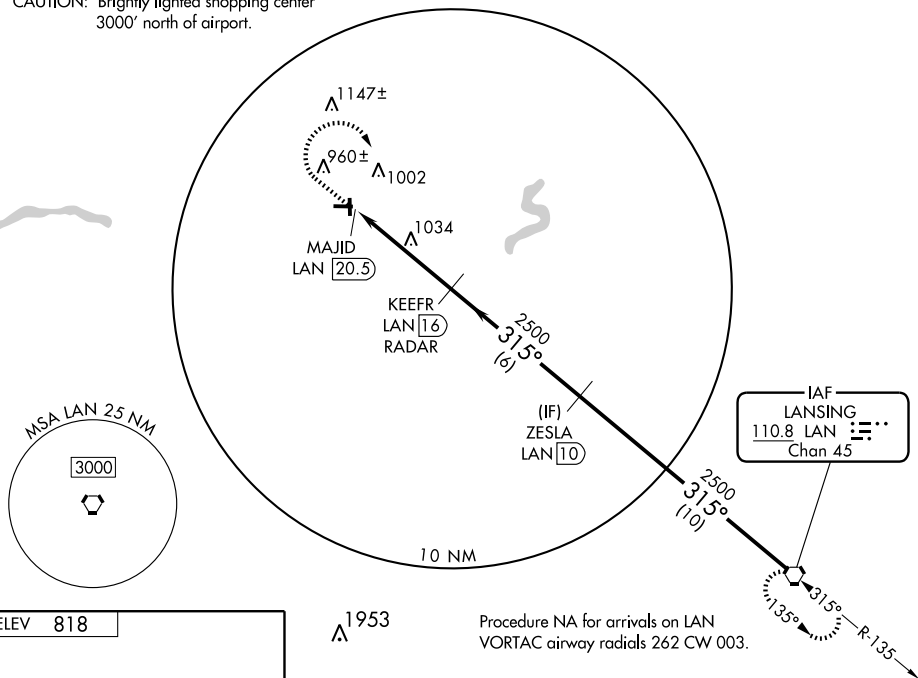
▼ Use Lansing altimeter setting; when not received, use Charlotte altimeter setting and increase all MDAs 20 feet, and increase Cat C visibility ¼ mile.
▲ NA

MISSED APPROACH: Climb to 2500 then right turn direct LAN VORTAC and hold.

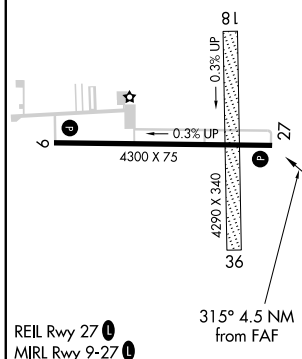
LANSING APP CON
118.65 226.4

UNICOM
122.8 (CTAF) 0

CAUTION: Brightly lighted shopping center 3000' north of airport.



ELEV **818**



REIL Rwy 27 **0**
MIRL Rwy 9-27 **0**

DME or RADAR REQUIRED

REIL Rwy 27
MIRL Rwy 9-27

FAF to MAP 4.5 NM					
Knots	60	90	120	150	180
Min:Sec	4:30	3:00	2:15	1:48	1:30

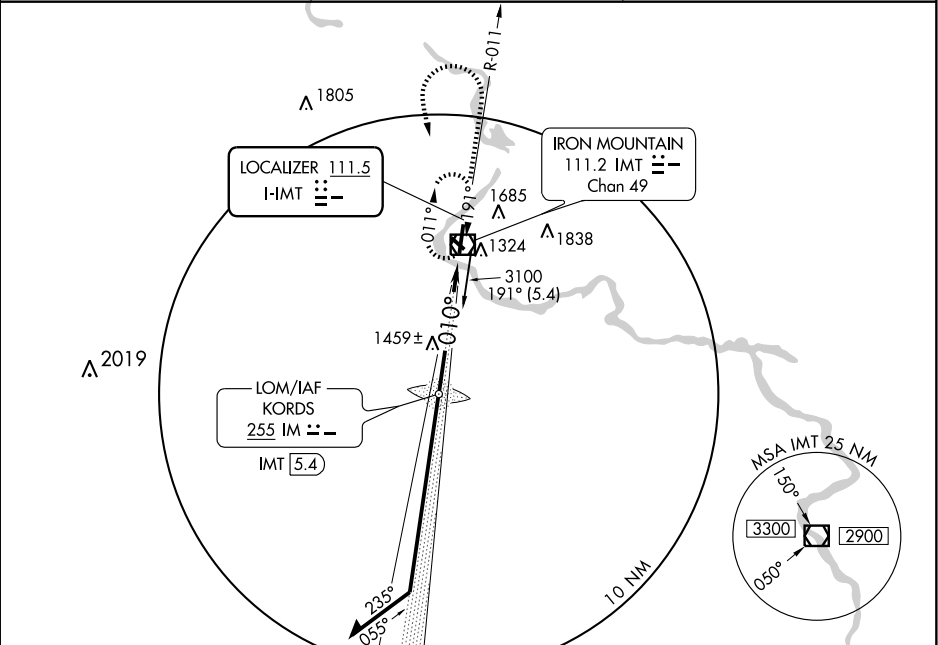
CATEGORY	A	B	C	D
CIRCLING	1400-1 582 (600-1)	1400-1¼ 582 (600-1¼)	1400-1½ 582 (600-1½)	NA

LOC I-IMT	APP CRS	Rwy Idg	6501
111.5	010°	TDZE	1133
		Apt Elev	1182

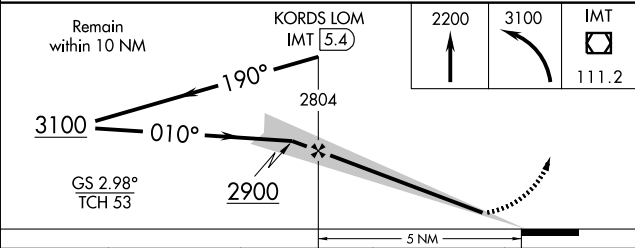
ILS RWY 1
IRON MOUNTAIN/FORD (IMT)

<div><div></div><div>Circling not authorized NE of Rwy 19 and 31.</div></div>	<div><div>MALS R</div><div><div></div><div></div></div></div>	<div>MISSED APPROACH: Climb to 2200, then climbing left turn to 3100 direct IMT VOR/DME and hold.</div>
---	---	---

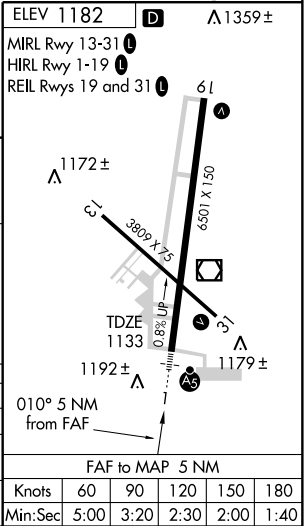
ASOS 119.025	MINNEAPOLIS CENTER 121.25 322.5	UNICOM 122.8 (CTAF) 1
-----------------	------------------------------------	--------------------------



ADF or DME REQUIRED



CATEGORY	A	B	C	D
S-ILS 1	1333-1/2 200 (200-1/2)			
S-LOC 1	1720-1/2 587 (600-1/2)	1720-1 587 (600-1)	1780-1 587 (600-1 1/4)	1720-1 587 (600-1 1/4)
CIRCLING	1720-1 538 (600-1)	1780-1 598 (600-1 1/2)	1780-2 598 (600-2)	1780-2 598 (600-2)



LOC I-MT	APP CRS	Rwy Idg	6501
<u>111.5</u>	190°	TDZE	1182
		Apt Elev	1182

LOC/DME BC RWY 19

IRON MOUNTAIN/FORD (IMT)

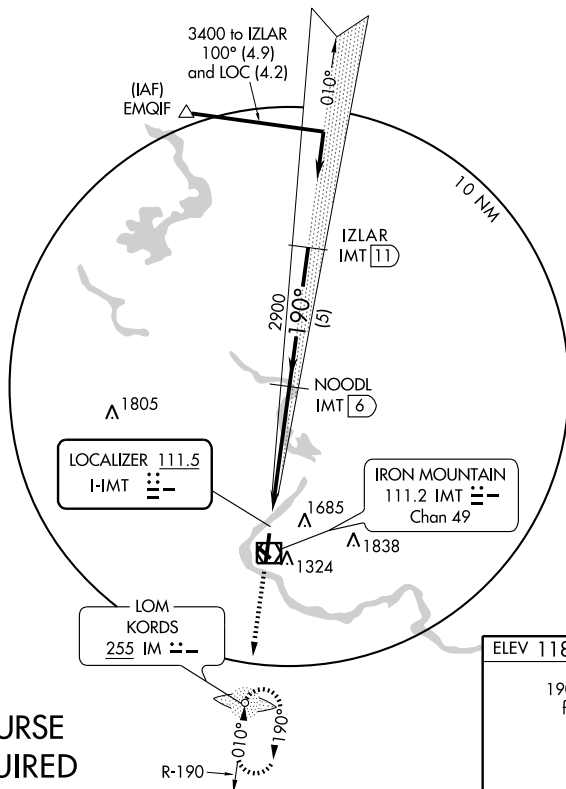
T Circling not authorized NE of Rwy 19 and 31.
DME from IMT VOR/DME.
Simultaneous reception of I-IMT and IMT DME required.

MISSED APPROACH: Climb to 3100
direct KORDS LOM and hold.

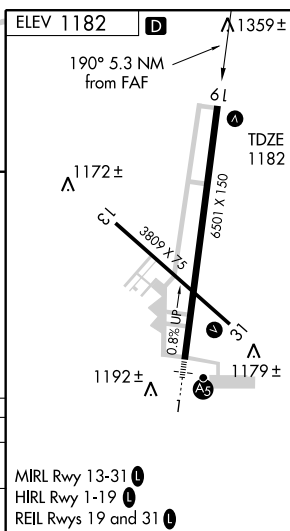
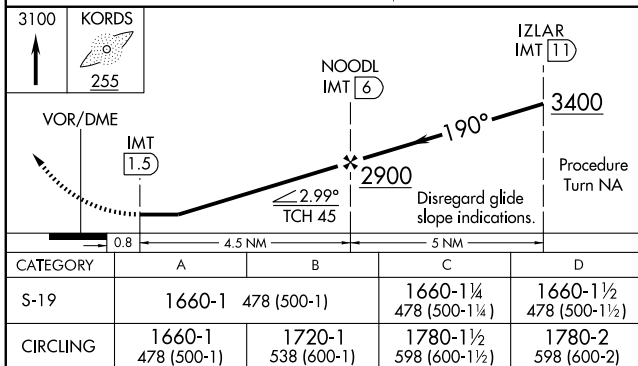
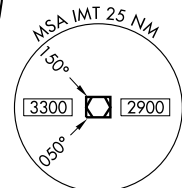
ASOS
119.025

MINNEAPOLIS CENTER
121.25 322.5

UNICOM
122.8 (CTAF) **L**



BACK COURSE
ADF REQUIRED



LOM IM
255

APP CRS
010°

Rwy Idg	6501
TDZE	1133
Apt Elev	1182

NDB RWY 1

IRON MOUNTAIN/FORD (IMT)



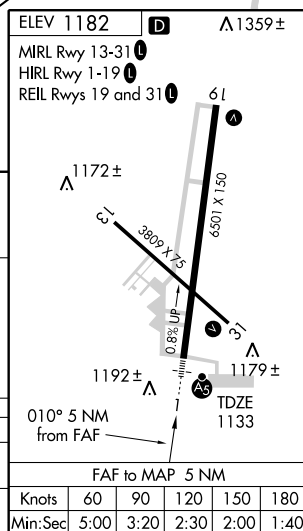
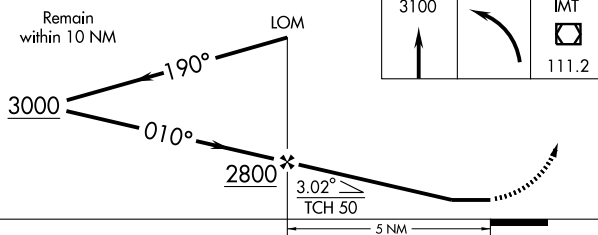
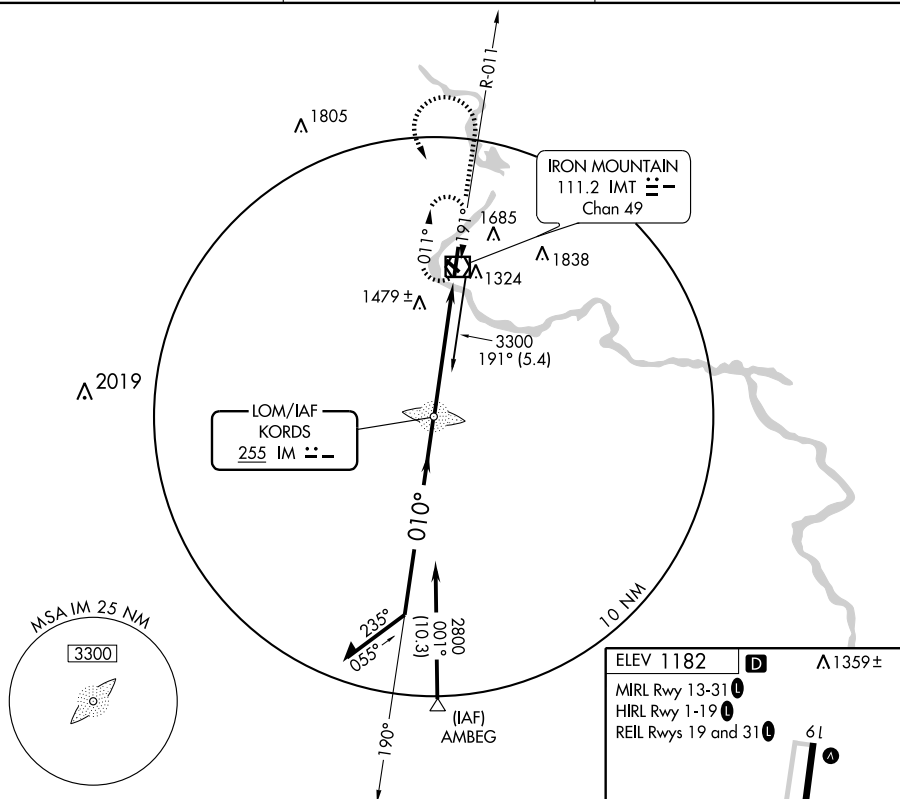
Circling not authorized NE of Rwy 19 and 31.
Circling not authorized at night to Rwy 31.



MISSED APPROACH: Climb to 3100, then left turn direct IMT VOR/DME and hold.

ASOS
119,025

MINNEAPOLIS CENTER
121.25 322.5

UNICOM
122.8 (CTAF) **L**

WAAS CH 77811 W01A	APP CRS 010°	Rwy Idg TDZE Apt Elev	6501 1133 1182
--	------------------------	-----------------------------	---

RNAV (GPS) RWY 1

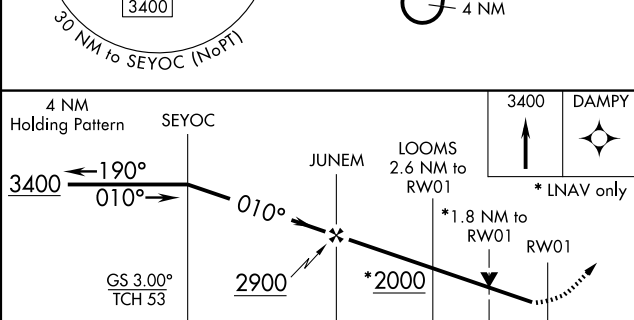
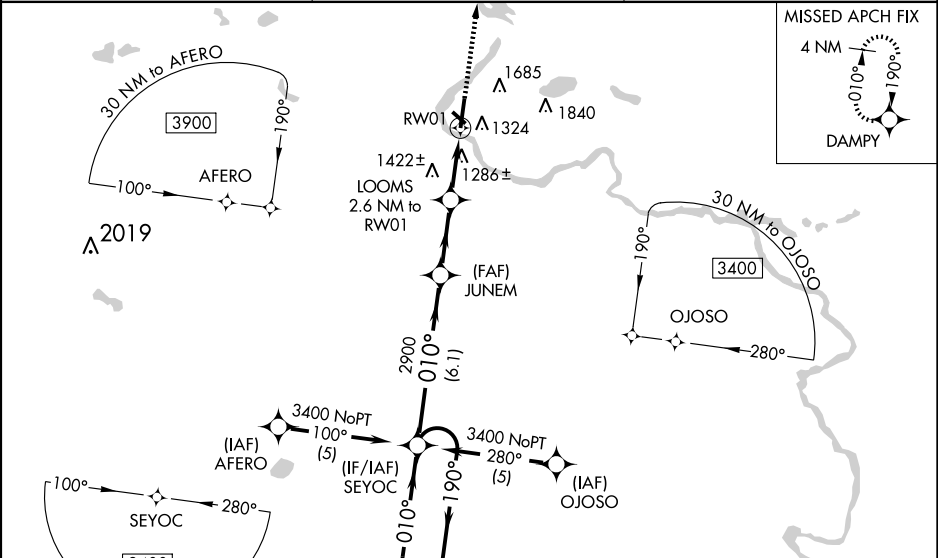
IRON MOUNTAIN/FORD (IMT)

▼ Inoperative table does not apply to LPV. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). Circling NA NE of Rwy 19 and 31. DME/DME RNP-0.3 NA. When local altimeter setting not received, use Escanaba altimeter setting and increase all DA/MDA 180 feet, increase LPV all Cats visibility ¼ mile, LNAV/VNAV all Cats visibility ¾ mile, LNAV Cat C and D visibility ½ mile, and Circling Cat B visibility ¼ mile, Cat C and D visibility ½ mile. For inoperative MALSR increase visibility LNAV Cat A and B ¼ mile. For Inoperative MALSR when using Escanaba altimeter setting, increase LPV all Cats visibility to 1 ½ mile, LNAV Cat A visibility to 1 mile. Baro-VNAV and VDP NA when using Escanaba altimeter setting.

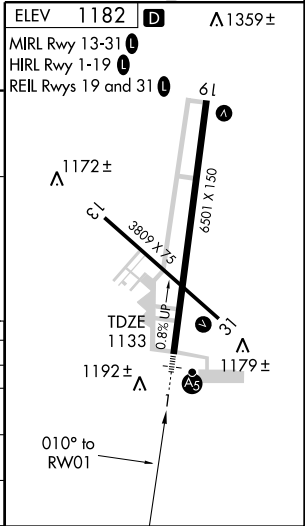
MALSR

MISSED APPROACH:
Climb to 3400
direct DAMPY
and hold.

ASOS 119.025	MINNEAPOLIS CENTER 121.25 322.5	UNICOM 122.8 (CTAF)
------------------------	---	-------------------------------



CATEGORY	A	B	C	D
LPV DA	1383-¾ 250 (300-¾)			
LNAV/VNAV DA	1806-2 673 (700-2)			
LNAV MDA	1760-¾ 627 (600-¾)	1760-1¼ 627 (600-1¼)	1760-1½ 627 (600-1½)	
CIRCLING	1760-1 578 (600-1)	1780-1¾ 598 (600-1¾)	1780-2 598 (600-2)	



APP CRS	Rwy Idg	6501
190°	TDZE	1182
	Apt Elev	1182

RNAV (GPS) RWY 19

IRON MOUNTAIN/FORD (IMT)

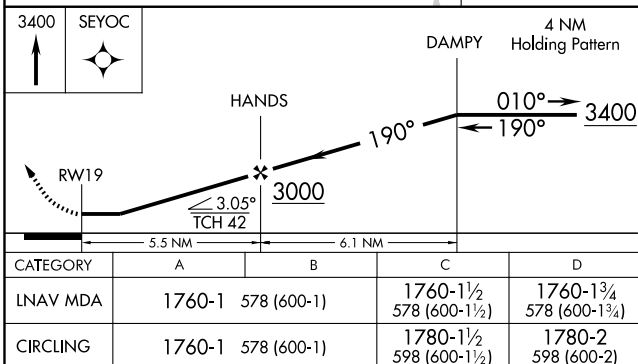
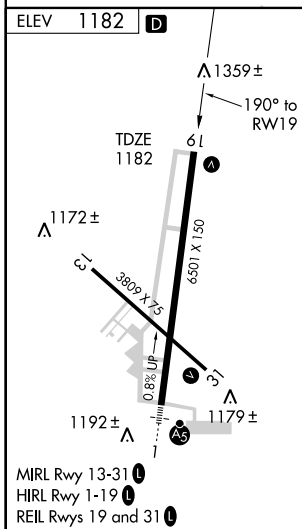
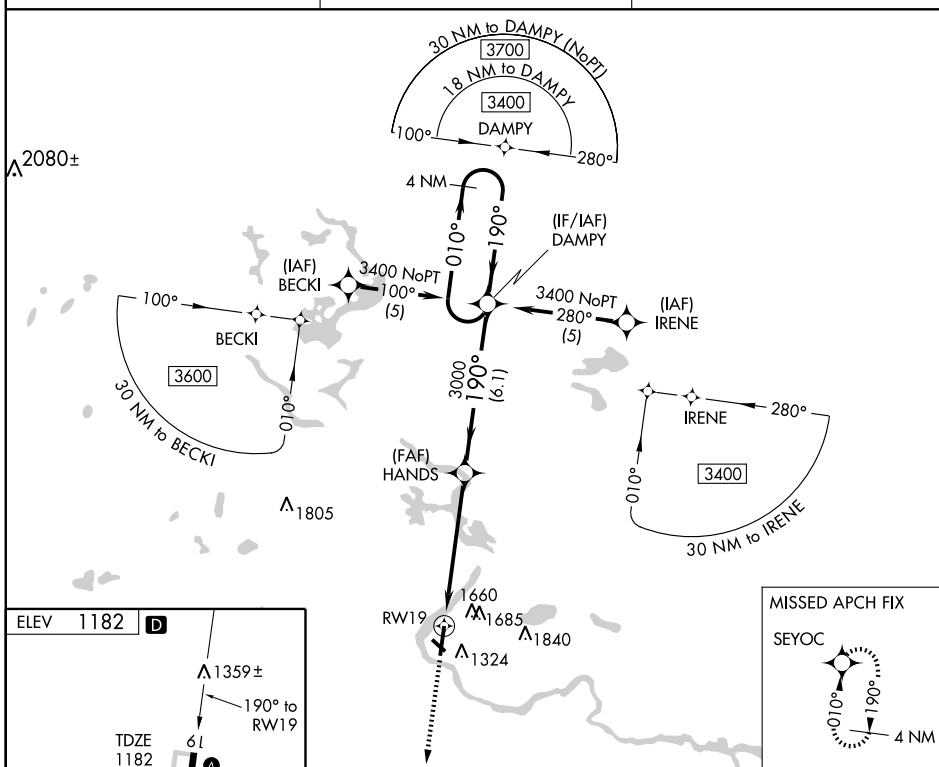


Circling NA northeast of Rwy 19 and 31. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Escanaba altimeter setting and increase all MDA 180 feet, increase LNAV and Circling Cat B visibility $\frac{1}{4}$ mile. Cats C and D visibility $\frac{3}{4}$ mile.

MISSED APPROACH: Climb to 3400
direct SEYOC and hold.

ASOS
119.025

MINNEAPOLIS CENTER
121.25 322.5

UNICOM
122.8 (CTAF) **L**

VOR/DME IMT 111.2 Chan 49	APP CRS 323°	Rwy Idg 3809 TDZE 1131 Apt Elev 1182
---	------------------------	---

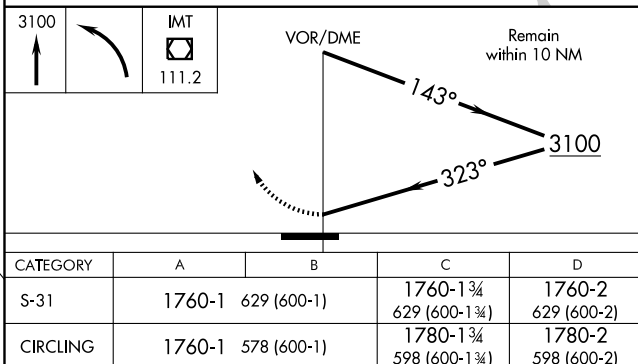
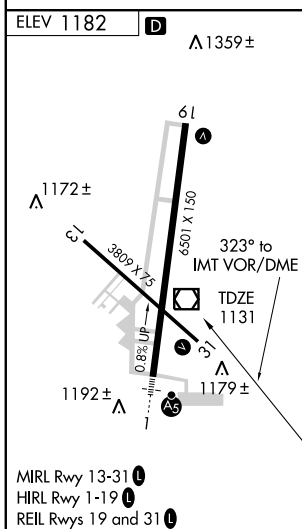
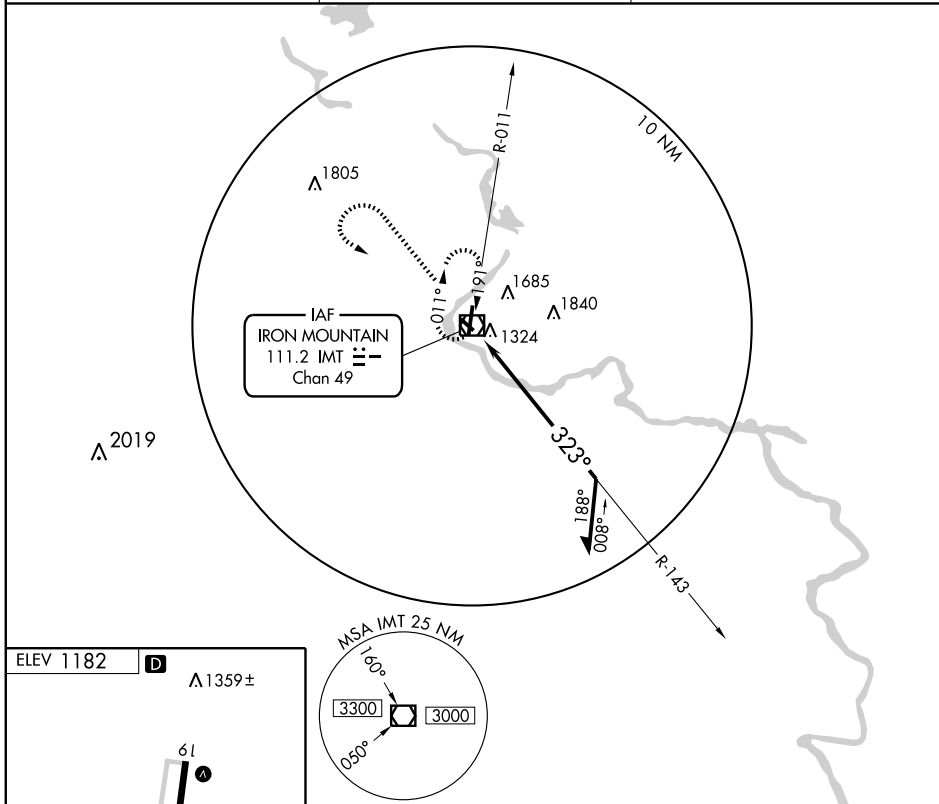
VOR RWY 31
IRON MOUNTAIN/FORD (IMT)

T Circling NA NE of kwy 19 and 31. Procedure NA at night. Visibility reduction by helicopters NA.

A When local altimeter setting not received, use Escanaba altimeter setting and increase all MDA 180 feet, and increase S-31 and Circling Cat B visibility ½ mile and Cats C and D visibility ½ mile.

MISSED APPROACH: Climb to 3100 then left turn direct IMT VOR/DME and hold.

ASOS 119.025	MINNEAPOLIS CENTER 121.25 322.5	UNICOM 122.8 (CTAF) 0
------------------------	---	--



LOC I-IWD	APP CRS	Rwy Idg	6501
111.5	270°	TDZE	1230
		Apt Elev	1230

ILS RWY 27

IRONWOOD/GOGEBIC-IRON COUNTY (IWD)

V Use Ironwood altimeter setting; if not received, procedure not authorized.



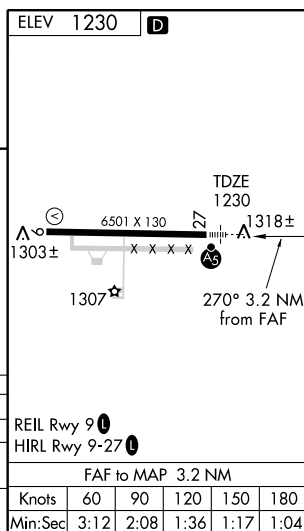
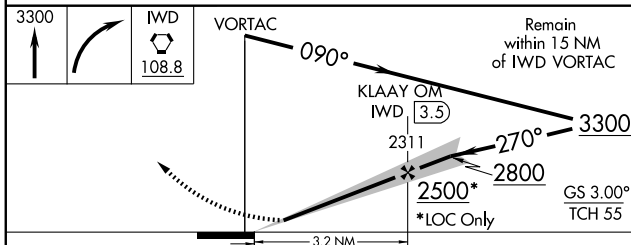
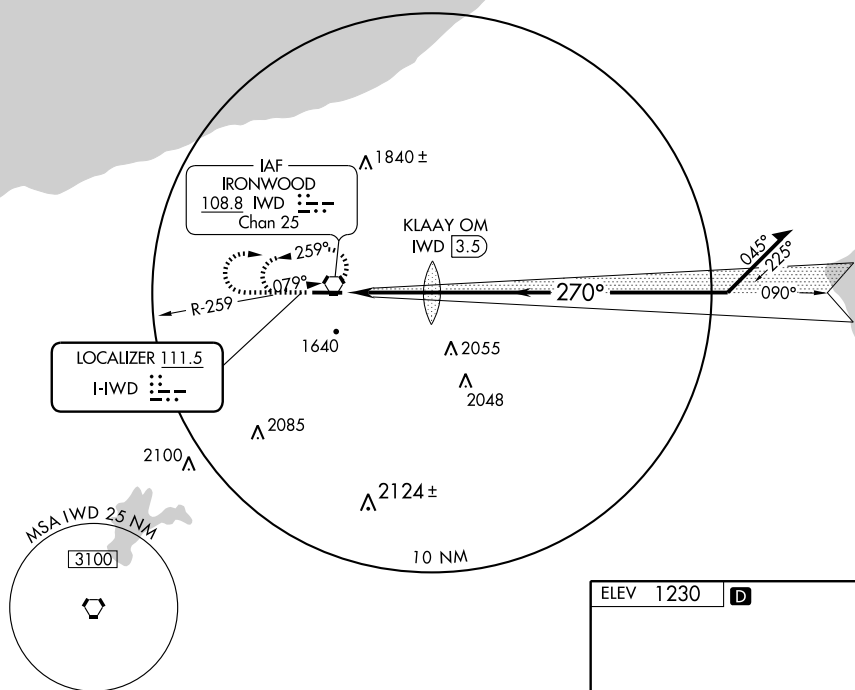
MISSED APPROACH: Climb to 3300, then right turn direct IWD VORTAC and hold.

AWOS-3
125.175

MINNEAPOLIS CENTER
133.55

GREEN BAY RADIO
122.3

UNICOM
122.8 (CTAF)



CATEGORY	A	B	C	D
S-ILS 27	1430-1/2 200 (200-1/2)			
S-LOC-27	1720-1/2 490 (500-1/2)	1720-3/4 490 (500-3/4)	1720-1 490 (500-1)	
CIRCLING	2100-1 870 (900-1)	2100-1 1/4 870 (900-1 1/4)	2100-2 1/2 870 (900-2 1/2)	2220-3 990 (1000-3)

REIL Rwy 9 **1**
HIRL Rwy 9-27 **1**

FAF to MAP 3.2 NM

Knots	60	90	120	150	180
Min:Sec	3:12	2:08	1:36	1:17	1:04

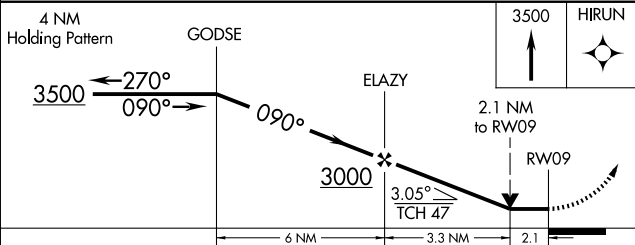
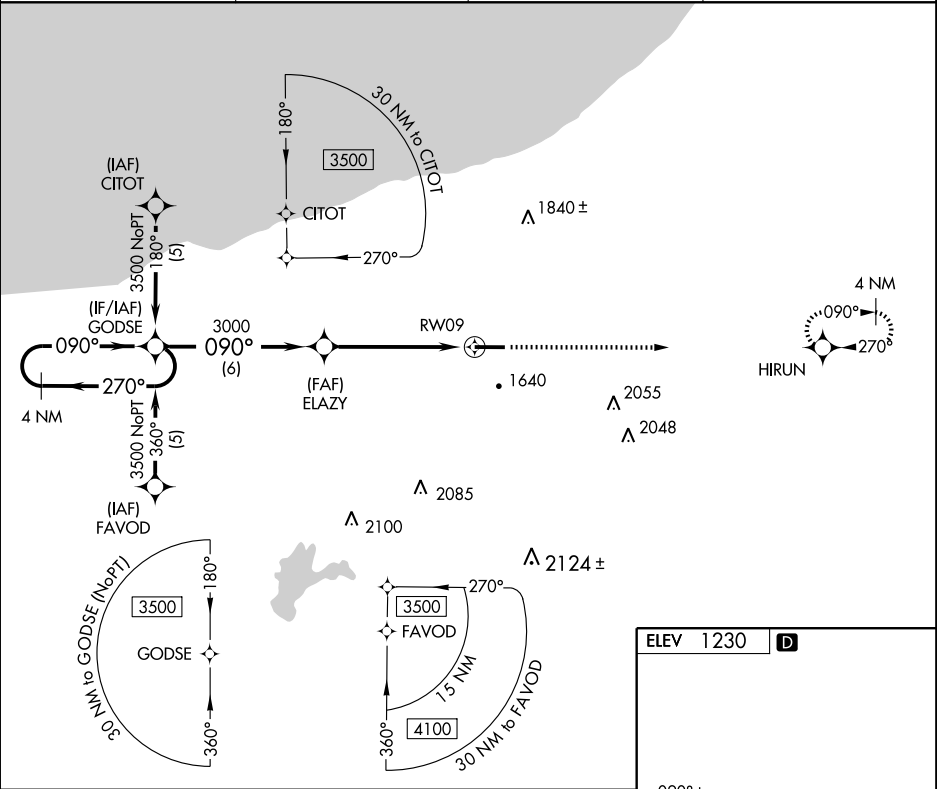
APP CRS	Rwy Idg	6501
090°	TDZE	1230
	Apt Elev	1230

RNAV (GPS) RWY 9

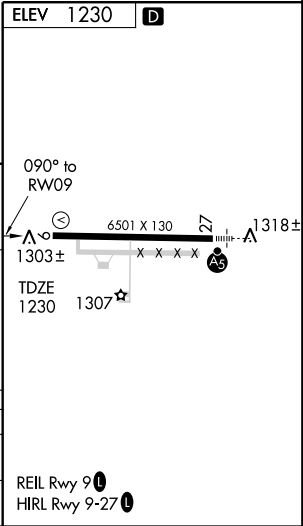
IRONWOOD/GOGEBIC-IRON COUNTY (IWD)

<p>▼ DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.</p> <p>▲ When local altimeter setting not received, use Ashland altimeter setting and increase all MDA 140 feet, increase LNAV Cat B visibility ¼ mile, Cat C/D ½ mile and increase Circling Cat A/B visibility ¼ mile, Cat C ½ mile.</p>	<p>MISSED APPROACH: Climb to 3500 direct HIRUN and hold.</p>
--	--

AWOS-3 125.175	MINNEAPOLIS CENTER 133.55	GREEN BAY RADIO 122.3	UNICOM 122.8 (CTAF) 1
-------------------	------------------------------	--------------------------	---------------------------------



CATEGORY	A	B	C	D
LNAV MDA	1940-1	710 (800-1)	1940-2	1940-2¼
CIRCLING	2100-1	2100-1¼	2100-2½	2220-3
	870 (900-1)	870 (900-1¼)	870 (900-2½)	990 (1000-3)



WAAS CH 50212 W27A	APP CRS 270°	Rwy Idg 6501 TDZE 1230 Apt Elev 1230
--	------------------------	---

RNAV (GPS) RWY 27

IRONWOOD/GOGEBIC-IRON COUNTY (IWD)

- ▼** Inoperative table does not apply to LPV and LNAV/VNAV all Cats and LNAV Cats A and B. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. When using Ashland altimeter setting: inoperative table does not apply to LNAV/VNAV all Cats and LNAV Cat A. When using Ashland altimeter setting: for inoperative MALSR, increase LNAV Cat B visibility to 1 ¼ mile. Baro-VNAV and VDP NA when using Ashland altimeter setting. When local altimeter setting not received, use Ashland altimeter setting and increase all DA 132 feet and all MDA 140 feet, increase LNAV/VNAV Cat C visibility ¼ mile, LNAV Cat C/D visibility ½ mile, and Circling Cat A/B visibility ¼ mile, Cat C ½ mile.

MALSR

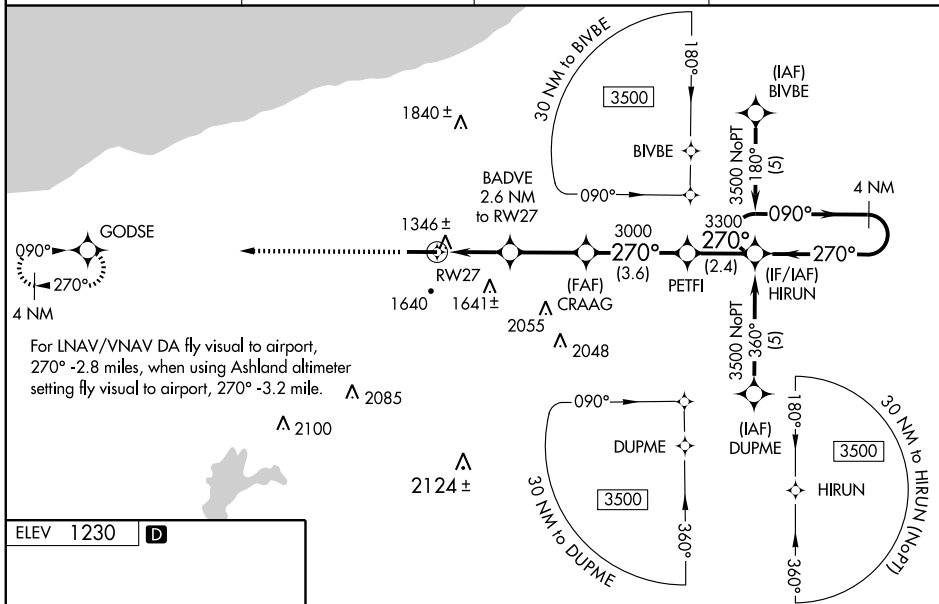


MISSED APPROACH:
Climb to 3500 direct
GODSE and hold.

AWOS-3
125.175

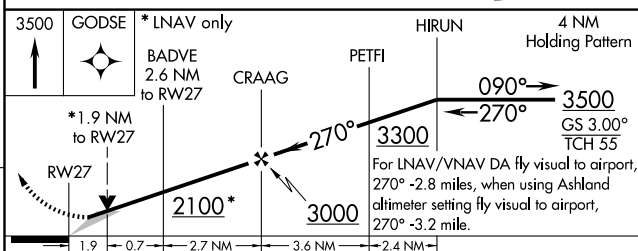
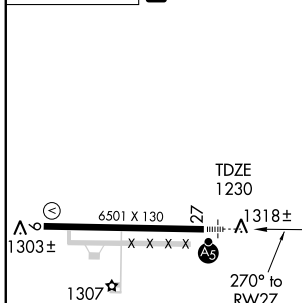
MINNEAPOLIS CENTER
133.55

GREEN BAY RADIO
122.3

UNICOM
122.8 (CTAF) **L**

EC-1. 17 DEC 2009 to 14 JAN 2010

ELEV	1230	D
------	------	---



CATEGORY	A	B	C	D
LPV DA	1430-1 200 (200-1)			
LNAV/ VNAV DA	2166-2	936 (1000-2)	2166-2 ³ / ₄ 936 (1000-2 ³ / ₄)	2166-3 936 (1000-3)
LNAV MDA	1900-1	670 (700-1)	1900-1 ¹ / ₄ 670 (700-1 ¹ / ₄)	1900-1 ¹ / ₂ 670 (700-1 ¹ / ₂)
CIRCLING	2100-1 870 (900-1)	2100-1 ¹ / ₄ 870 (900-1 ¹ / ₄)	2100-2 ¹ / ₂ 870 (900-2 ¹ / ₂)	2220-3 990 (1000-3)

REIL Rwy 9 **L**HIRL Rwy 9-27 **L**

CATEGORY	A	B	C	D
S-9	1740-1	510 (600-1)	1740-1½	510 (600-1½)
CIRCLING	2100-1 870 (900-1)	2100-1¼ 870 (900-1¼)	2100-2½ 870 (900-2½)	2220-3 990 (1000-3)

REIL Rwy 9-0
HIRL Rwy 9-27

V For inoperative MALSR when using Ashland altimeter setting, increase
A S-27 Cat A visibility to 1 mile. When local altimeter setting not received,
use Ashland altimeter setting and increase all MDA 140 feet, increase
S-27 Cat A/B visibility $\frac{1}{4}$ mile, Cat C/D $\frac{1}{2}$ mile, increase Circling Cat A/B
visibility $\frac{1}{4}$ mile. Cat C $\frac{1}{2}$ mile.



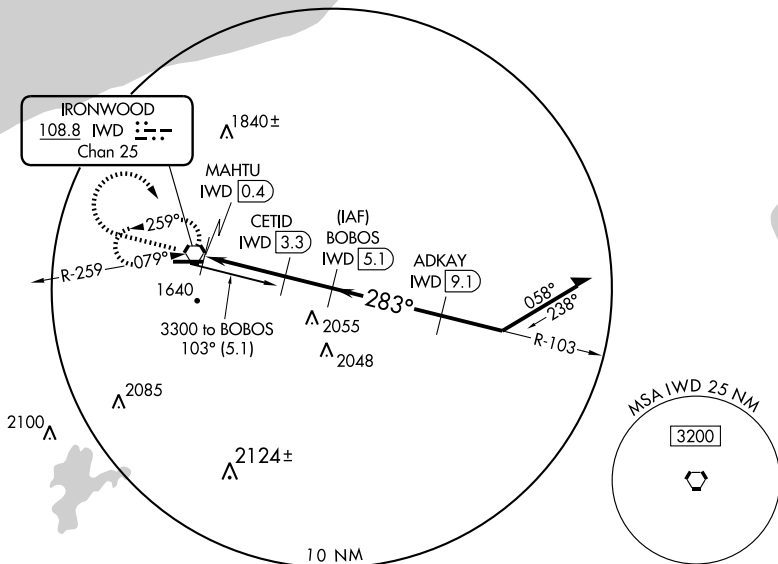
MISSED APPROACH: Climb to 3300 then right turn direct IWD VORTAC and hold.

AWOS-3
125.175

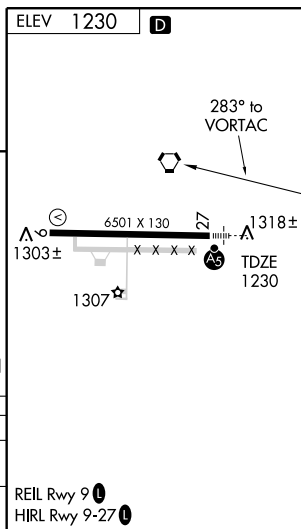
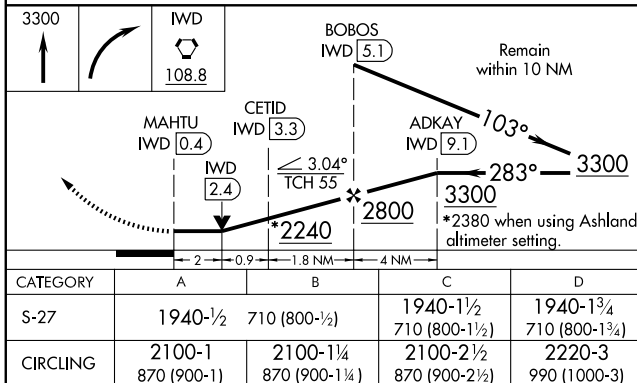
MINNEAPOLIS CENTER
133.55

GREEN BAY RADIO
122.3

UNICOM
122.8 (CTAF) **L**



EC-1. 17 DEC 2009 to 14 JAN 2010



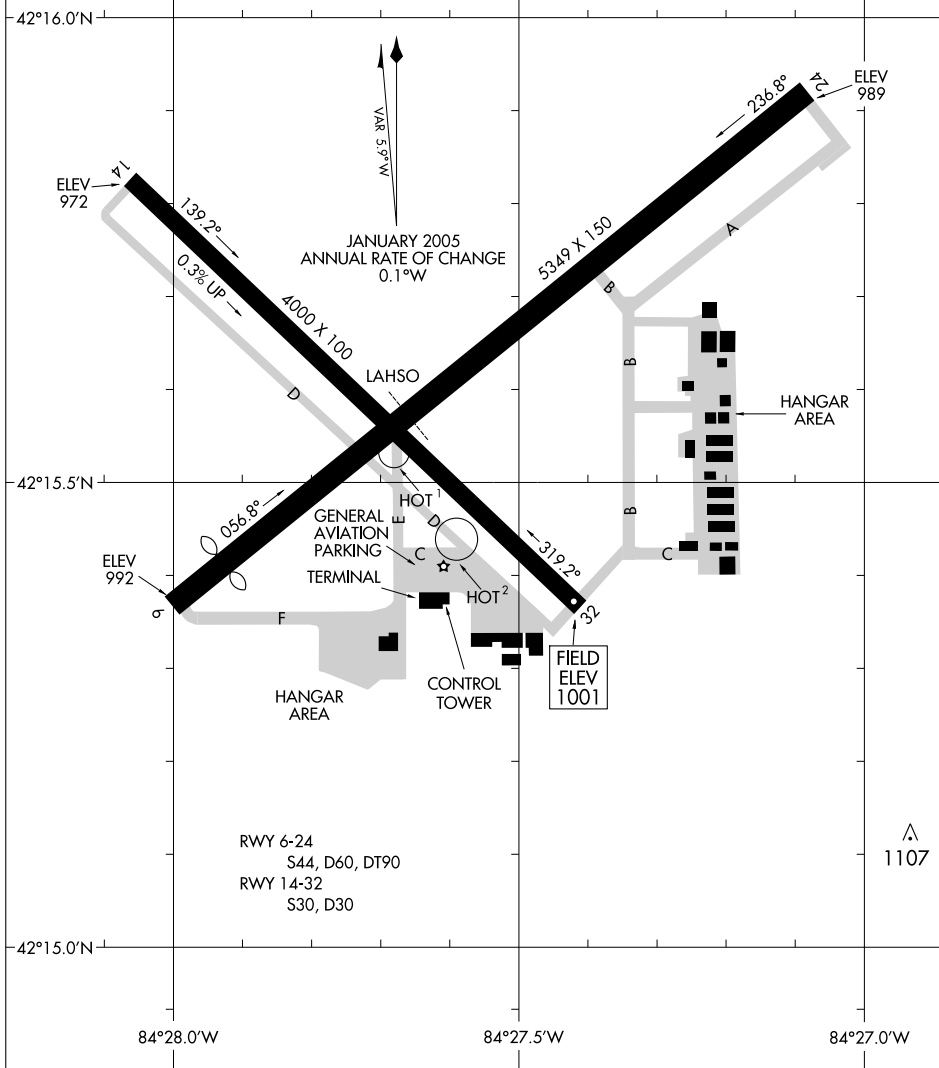
AIRPORT DIAGRAM

AL-861 (FAA)

JACKSON COUNTY-REYNOLDS FIELD (JXN)
JACKSON, MICHIGAN

ATIS
125.725
JACKSON TOWER ★
128.475 257.8
GND CON
121.9
CLNC DEL
121.9

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.



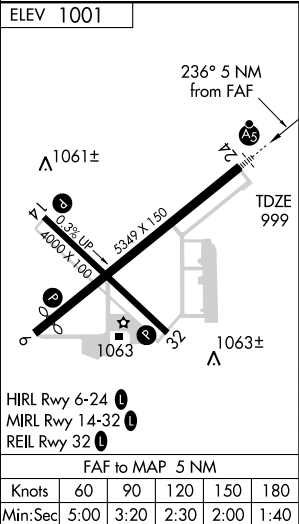
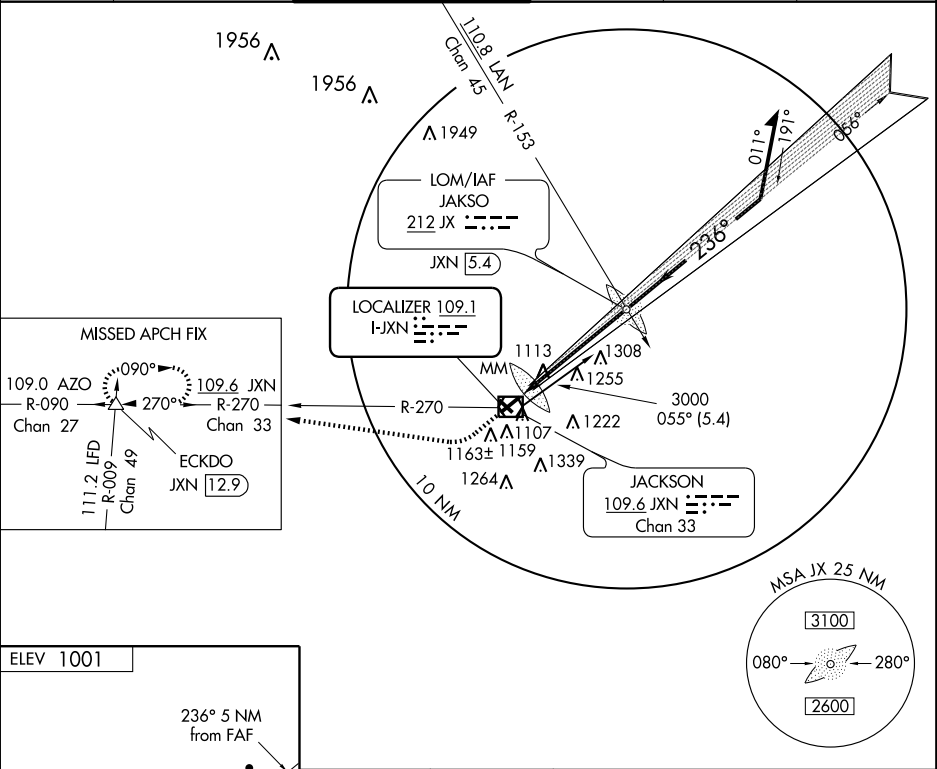
EC-1, 17 DEC 2009 to 14 JAN 2010

ILS RWY 24

JACKSON COUNTY-REYNOLDS FIELD (JXN)

LOC I-JXN	APP CRS	Rwy Idg	5349
109.1	236°	TDZE	999
		Apt Elev	1001

▼ ▲		MALSRL ▲	MISSED APPROACH: Climb to 1400, then climbing right turn to 3000 via JXN R-270 to ECKDO Int/JXN 12.9 DME and hold.		
ATIS 125.725	LANSING APP CON 127.3 357.6	JACKSON TOWER ★ 128.475 (CTAF) 257.8	GND CON 121.9	CLNC DEL 121.9	UNICOM 122.95



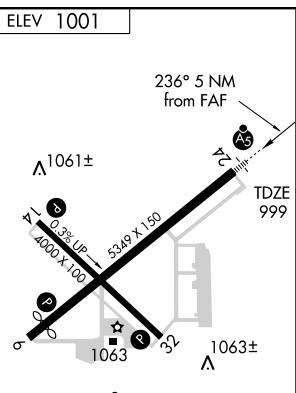
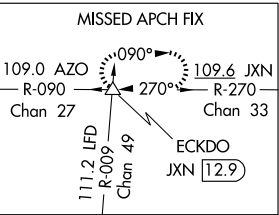
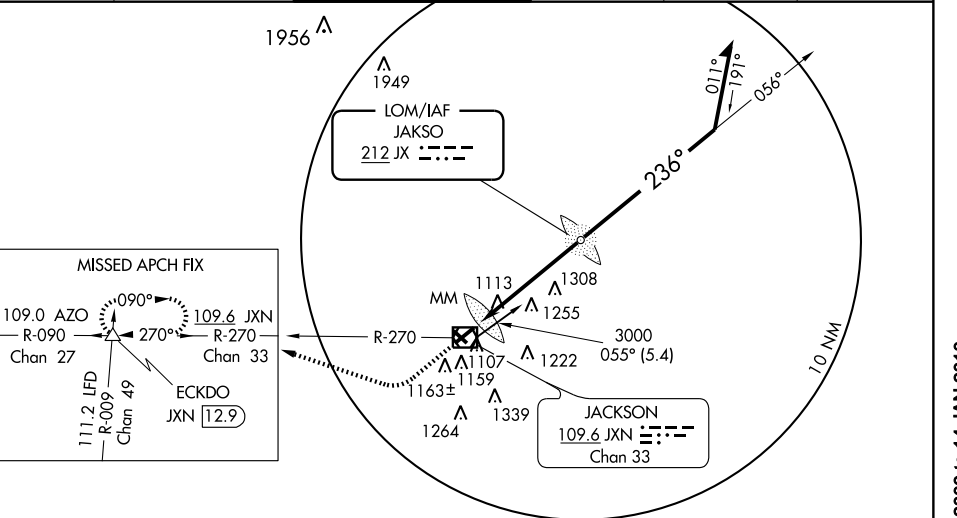
ELEV 1001		1400 3000 JXN R-270 109.6 ECKDO		LOM/INT JXN 5.4		Remain within 10 NM	
236° 5 NM from FAF		MM		2638		056° 236° 3000	
1061±		0.5 4.5 NM		2700		GS 3.00° TCH 47	
1063±		CATEGORY A B C D		S-ILS 24 1199-½ 200 (200-½)			
1063		S-LOC 24 1440-½ 441 (500-½)		1440-¾ 441 (500-¾)		1440-1 441 (500-1)	
1063±		CIRCLING 1520-1 519 (600-1)		1520-1½ 519 (600-1½)		1640-2 639 (700-2)	
FAF to MAP 5 NM							
Knots 60 90 120 150 180							
Min:Sec 5:00 3:20 2:30 2:00 1:40							

▼
▲

MALSR
AS

MISSED APPROACH: Climbing right to 3000 via JXN R-270 to ECKDO Int/JXN 12.9 DME and hold.

ATIS 125.725	LANSING APP CON 127.3 357.6	JACKSON TOWER ★ 128.475 (CTAF) 0 257.8	GND CON 121.9	CLNC DEL 121.9	UNICOM 122.95
------------------------	---------------------------------------	---	-------------------------	--------------------------	-------------------------



HIRL Rwy 6-24
MIRL Rwy 14-32
REIL Rwy 32

FAF to MAP 5 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

3000

JXN R-270 109.6

ECKDO

LOM

056°

236°

3000

2700

5 NM

Remain within 10 NM

MSA JX 25 NM

3100

2600

080°

280°

CATEGORY	A	B	C	D
S-24	1660-1 661 (700-1)	1660-1 661 (700-1)	1660-1 661 (700-1)	1660-1 661 (700-1)
CIRCLING	1660-1 659 (700-1)	1660-1 659 (700-1)	1660-1 659 (700-1)	1660-1 659 (700-1)

EC-1. 17 DEC 2009 to 14 JAN 2010

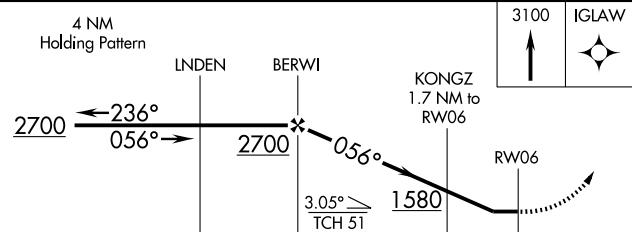
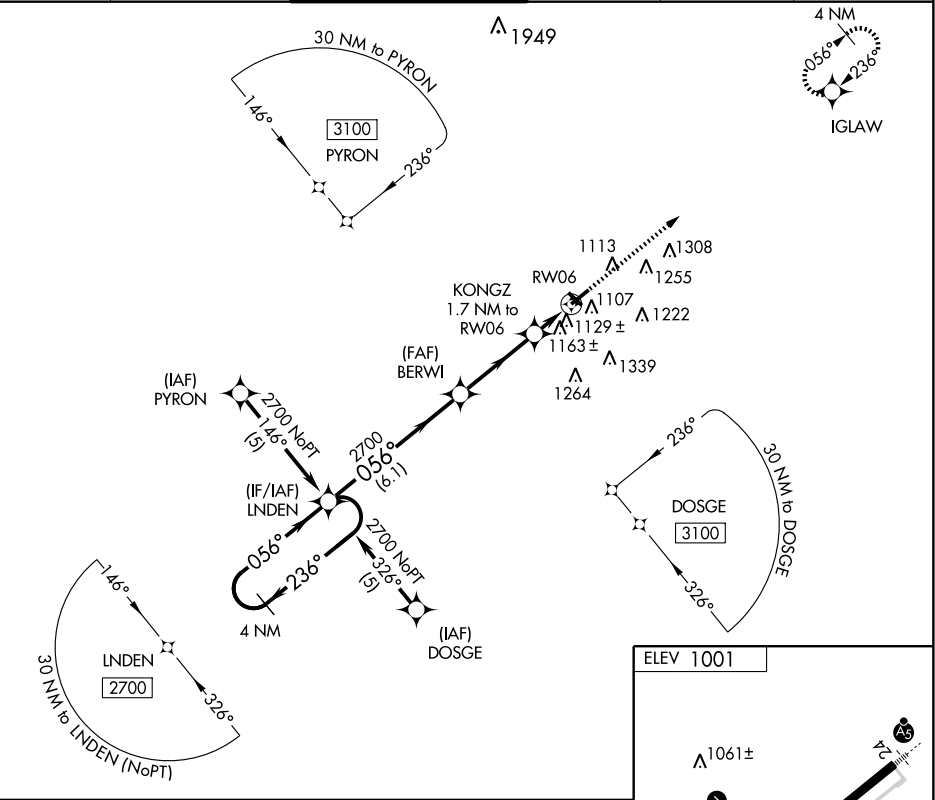
APP CRS	Rwy Idg	4909
056°	TDZE	999
	Apt Elev	1001

RNAV (GPS) RWY 6

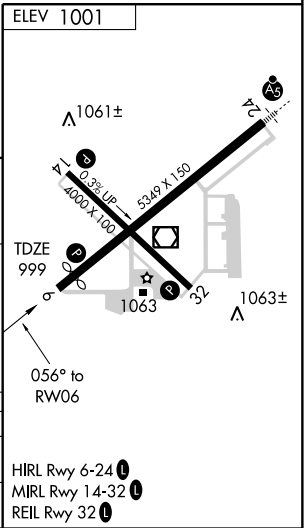
JACKSON COUNTY-REYNOLDS FIELD (JXN)

<div><div>▼</div><div>▲</div></div>	DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Mason altimeter setting and increase all MDA 60 feet, increase all Cat C/D visibilities ¼ mile.	MISSED APPROACH: Climb to 3100 direct IGLAW and hold.
-------------------------------------	--	---

ATIS 125.725	LANSING APP CON 127.3 357.6	JACKSON TOWER ★ 128.475 (CTAF) 257.8	GND CON 121.9	CLNC DEL 121.9	UNICOM 122.95
-----------------	--------------------------------	---	------------------	-------------------	------------------



CATEGORY	A	B	C	D
LNAV MDA	1380-1 381 (400-1)			1380-1¼ 381 (400-1¼)
CIRCLING	1520-1 519 (600-1)		1520-1½ 519 (600-1½)	1640-2 639 (700-2)



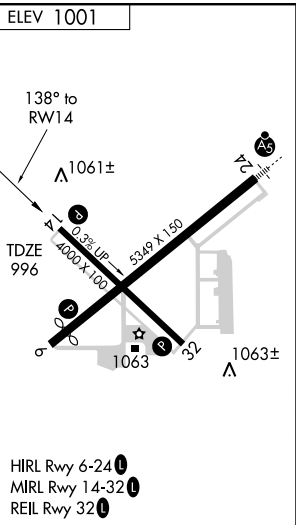
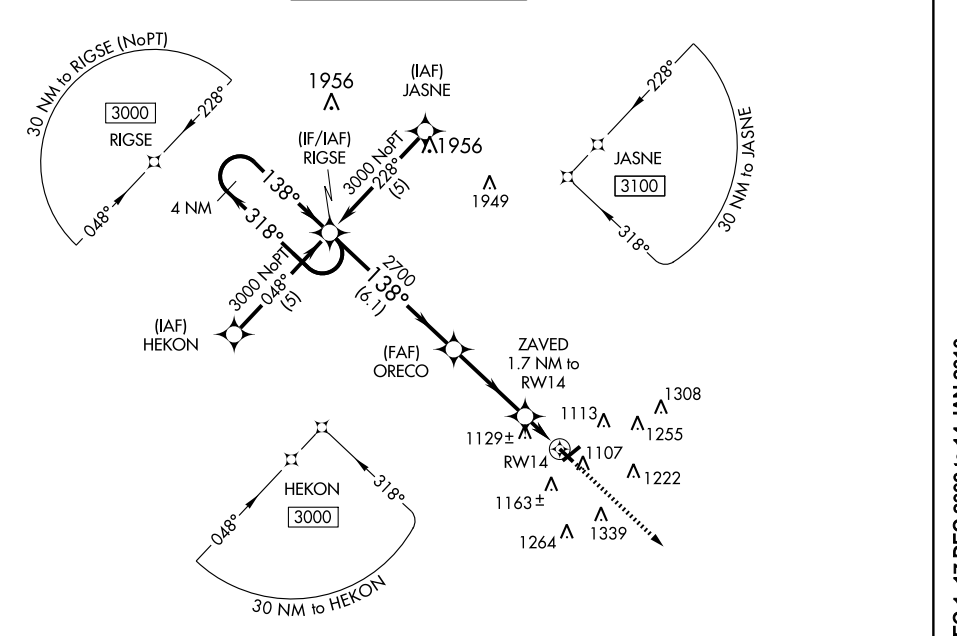
▼

▲

DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.
When local altimeter setting not received, use Mason altimeter setting and increase all MDA 60 feet, increase all Cat C/D visibilities ¼ mile.

MISSED APPROACH: Climb to 3100 direct JERIK and hold.

ATIS 125.725	LANSING APP CON 127.3 357.6	JACKSON TOWER ★ 128.475 (CTAF) 257.8	GND CON 121.9	CLNC DEL 121.9	UNICOM 122.95
-----------------	--------------------------------	---	------------------	-------------------	------------------



4 NM Holding Pattern				3100	JERIK
RIGSE				↑	✧
ORECO					
ZAVED 1.7 NM to RW14					
RW14					
VGSI and descent angles not coincident.					
CATEGORY	A	B	C	D	
LNAB MDA	1380-1 384 (400-1)			1380-1¼ 384 (400-1¼)	
CIRCLING	1520-1 519 (600-1)			1520-1½ 519 (600-1½) 1640-2 639 (700-2)	

EC-1.17 DEC 2009 to 14 JAN 2010

WAAS CH 82212 W24A	APP CRS 236°	Rwy Idg TDZE Apt Elev	5349 999 1001
--	------------------------	-----------------------------	--

RNAV (GPS) RWY 24

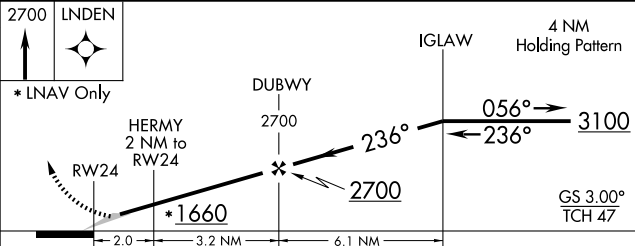
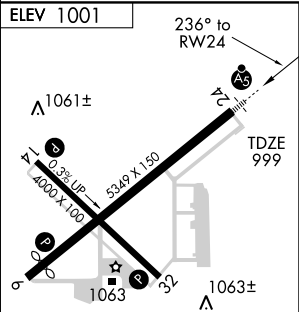
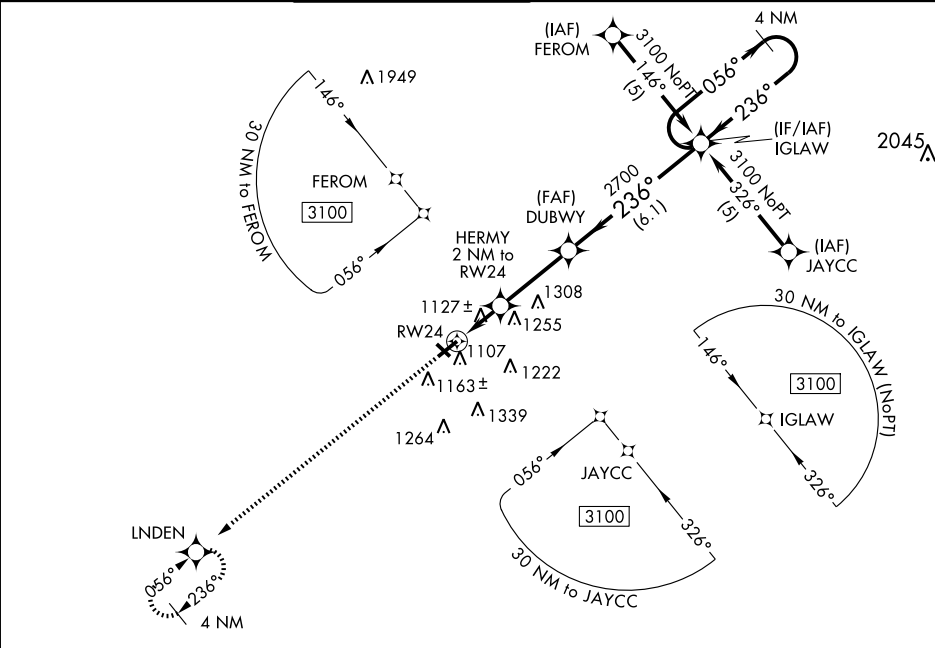
JACKSON COUNTY-REYNOLDS FIELD (JXN)

Baro-VNAV NA when using Mason altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 47°C (116°F) DME/DME RNP-0.3 NA. When local altimeter setting not received, use Mason altimeter setting and increase all DA 54 feet, all MDA 60 feet. Increase LNAV/VNAV all Cats, LNAV and circling Cat C/D visibility ½ mile.



MISSED APPROACH:
Climb to 2700 direct
INDEN and hold.

ATIS 125.725	LANSING APP CON 127.3 357.6	JACKSON TOWER ★ 128.475 (CTAF) 0 257.8	GND CON 121.9	CLNC DEL 121.9	UNICOM 122.95
------------------------	---------------------------------------	--	-------------------------	--------------------------	-------------------------



CATEGORY	A	B	C	D
LPV DA	1199-½ 200 (200-½)			
LNAV/VNAV DA	1409-1 410 (500-1)			
LNAV MDA	1560-½ 561 (600-½)	1560-1 561 (600-1)	1560-1 561 (600-1)	1560-1 561 (600-1)
CIRCLING	1560-1 559 (600-1)	1560-1 559 (600-1)	1560-1 559 (600-1)	1560-1 559 (600-1)

HIRL Rwy 6-24
MIRL Rwy 14-32
REIL Rwy 32

JACKSON COUNTY-REYNOLDS FIELD (JXN)

MISSED APPROACH:
Climb to 3000 direct
RIGSE and hold.

UNICOM
122.95

3000
↑
RIGSE

KUSRE

318°

318°

3100

4 NM Holding Pattern

3.04°
TCH 45

2700

5.1 NM

6.1 NM

JERIK

VGSI and descent angles not coincident.

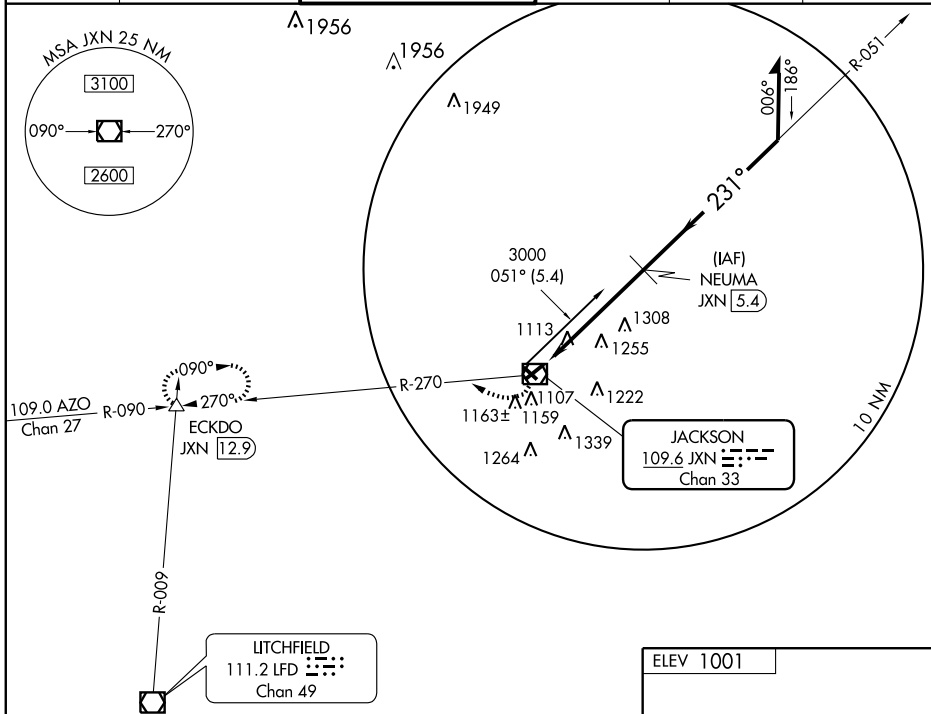
CATEGORY	A	B	C	D
RNAV MDA	1560-1	559 (600-1)	1560-1½ 559 (600-1½)	1560-1¾ 559 (600-1¾)
CIRCLING	1560-1	559 (600-1)	1560-1½ 559 (600-1½)	1640-2 639 (700-2)

VOR/DME RWY 24

JACKSON COUNTY-REYNOLDS FIELD (JXN)

- | | | | |
|--|--|--|--|
| | <p>When local altimeter setting not received, use Mason altimeter setting and increase all MDA 60 feet, increase all Cat C/D visibilities ¼ mile. VDP NA when using Mason altimeter setting.</p> | | <p>MISSED APPROACH: Climbing right turn to 3000 via JXN R-270 to ECKDO Int/JXN 12.9 DME and hold.</p> |
|--|--|--|--|

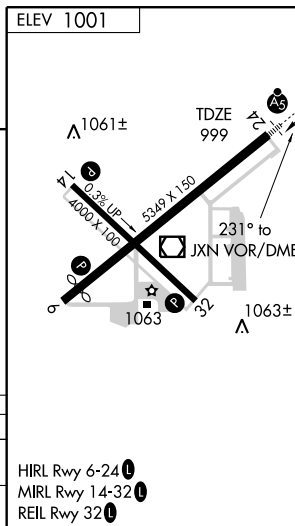
ATIS 125.725	LANSING APP CON 127.3 357.6	JACKSON TOWER ★ 128.475 (CTAF) 0 257.8	GND CON 121.9	CLNC DEL 121.9	UNICOM 122.95
------------------------	---------------------------------------	--	-------------------------	--------------------------	-------------------------



NEUMA INT JXN 5.4


VOR/DME
IKY JXN .5
JXN 2.3
NEUMA INT JXN 5.4
3000
2600
3000
051°
231°
≤ 3.00° TCH 45
Remain within 10 NM
1.8
3.1 NM

CATEGORY	A	B	C	D
S-24	1620-½ 621 (700-½)		1620-1¼ 621 (700-1¼)	1620-1½ 621 (700-1½)
CIRCLING	1620-1 619 (700-1)		1620-1¾ 619 (700-1¾)	1640-2 639 (700-2)



VOR RWY 6
JACKSON COUNTY-REYNOLDS FIELD (JXN)

MISSED APPROACH: Climbing left turn to 3000 via JXN R-344 to LESSY Int/JXN 11.4 DME and hold.

3000	JXN	LESSY
	R-344	\triangle
	<u>109.6</u>	

* 1720 when using Mason
altimeter setting.

VOR/DME JXN	APP CRS	Rwy Idg TDZE	4000
109.6	133°	996	
Chan 33		Apt Elev	1001

VOR RWY 14

JACKSON COUNTY-REYNOLDS FIELD (JXN)

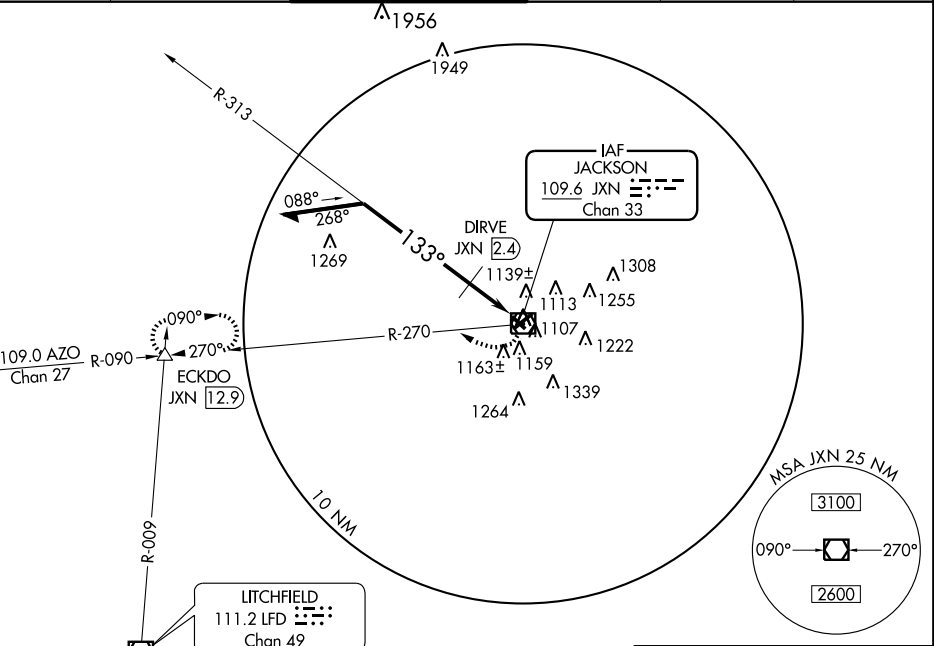
▼

Visibility reduction by helicopters NA. When local altimeter setting not received, use Mason altimeter setting and increase all MDA 60 feet, increase all Cat C/D visibilities ¼ mile.

▲

MISSED APPROACH: Climbing right turn to 3000 via JXN R-270 to ECKDO Int/JXN 12.9 DME and hold.

ATIS	LANSING APP CON	JACKSON TOWER ★	GND CON	CLNC DEL	UNICOM
125.725	127.3 357.6	128.475 (CTAF) 257.8	121.9	121.9	122.95



Remain within 10 NM

VOR/DME

6000

313°

2700

133°

1580°

2.78°

TCH 45

2.4 NM

3000

JXN R-270 109.6

ECKDO

VGSI and descent angles not coincident.

*1640 when using Mason altimeter setting.

CATEGORY	A	B	C	D
S-14	1580-1	584 (600-1)	1580-1½ 584 (600-1½)	1580-1¾ 584 (600-1¾)
CIRCLING	1580-1	579 (600-1)	1580-1½ 579 (600-1½)	1640-2 639 (700-2)
DIRVE MINIMUMS				
S-14	1400-1	404 (400-1)	1400-1¼	404 (400-1¼)
CIRCLING	1520-1	519 (600-1)	1520-1½ 519 (600-1½)	1640-2 639 (700-2)

ELEV 1001

133° to JXN VOR/DME

1061±

0.3% UP

5349 X 150

TDZE 996

1063

1063±

1086±

EC-1.17 DEC 2009 to 14 JAN 2010

VOR/DME JXN	APP CRS	Rwy Idg	4000
109.6	325°	TDZE	1001
Chan 33		Apt Elev	1001

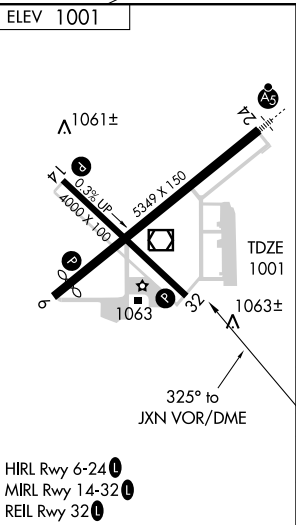
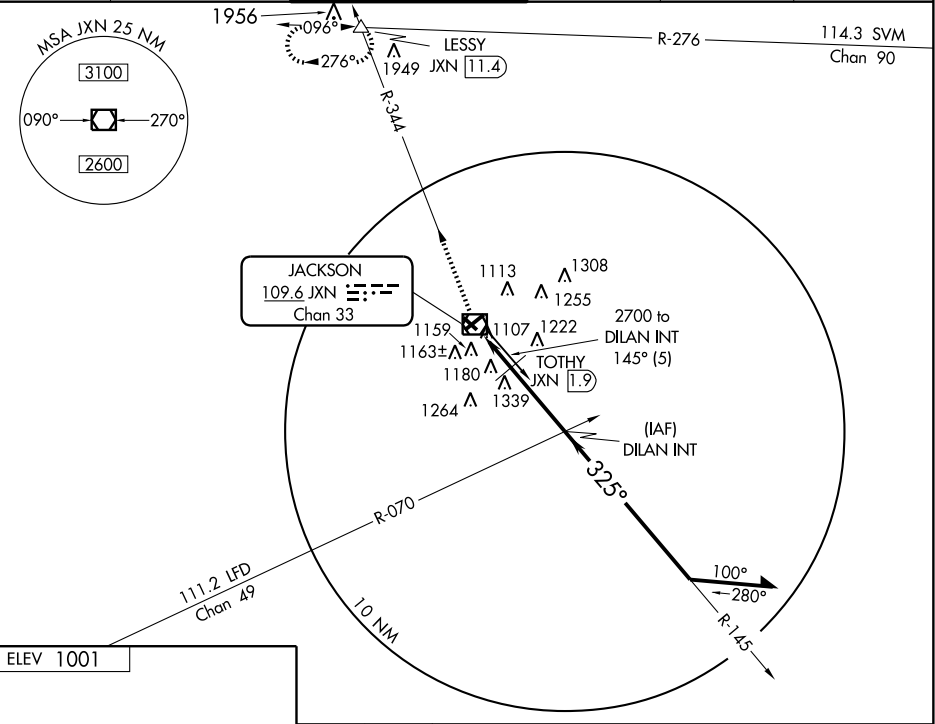
VOR RWY 32

JACKSON COUNTY-REYNOLDS FIELD (JXN)

▼ Visibility reduction by helicopters NA. When local altimeter setting not received, use Mason altimeter setting and increase all MDA 60 feet, increase all Cat C/D visibilities ¼ mile.

MISSED APPROACH: Climb to 3000 via JXN R-344 to LESSY Int/JXN 11.4 DME and hold.

ATIS	LANSING APP CON	JACKSON TOWER ★	GND CON	CLNC DEL	UNICOM
125.725	127.3 357.6	128.475 (CTAF) 257.8	121.9	121.9	122.95



	3000	JXN R-344 109.6	LESSY △	TOTHY JXN 1.9	DILAN INT	Remain within 10 NM
					3.04° TCH 45°	2700
					325° * 2600	VGSi and descent angles not coincident. *1660 when using Mason altimeter setting.
					1.7	3.1 NM
CATEGORY	A	B	C	D		
S-32	1600-1 599 (600-1)		1600-1½ 599 (600-1½)	1600-1¾ 599 (600-1¾)		
CIRCLING	1600-1 599 (600-1)		1600-1½ 599 (600-1½)	1640-2 639 (700-2)		
TOTHY MINIMUMS						
S-32	1460-1 459 (500-1)		1460-1¼ 459 (500-1¼)	1460-1½ 459 (500-1½)		
CIRCLING	1520-1 519 (600-1)		1520-1½ 519 (600-1½)	1640-2 639 (700-2)		

EC-1.17 DEC 2009 to 14 JAN 2010

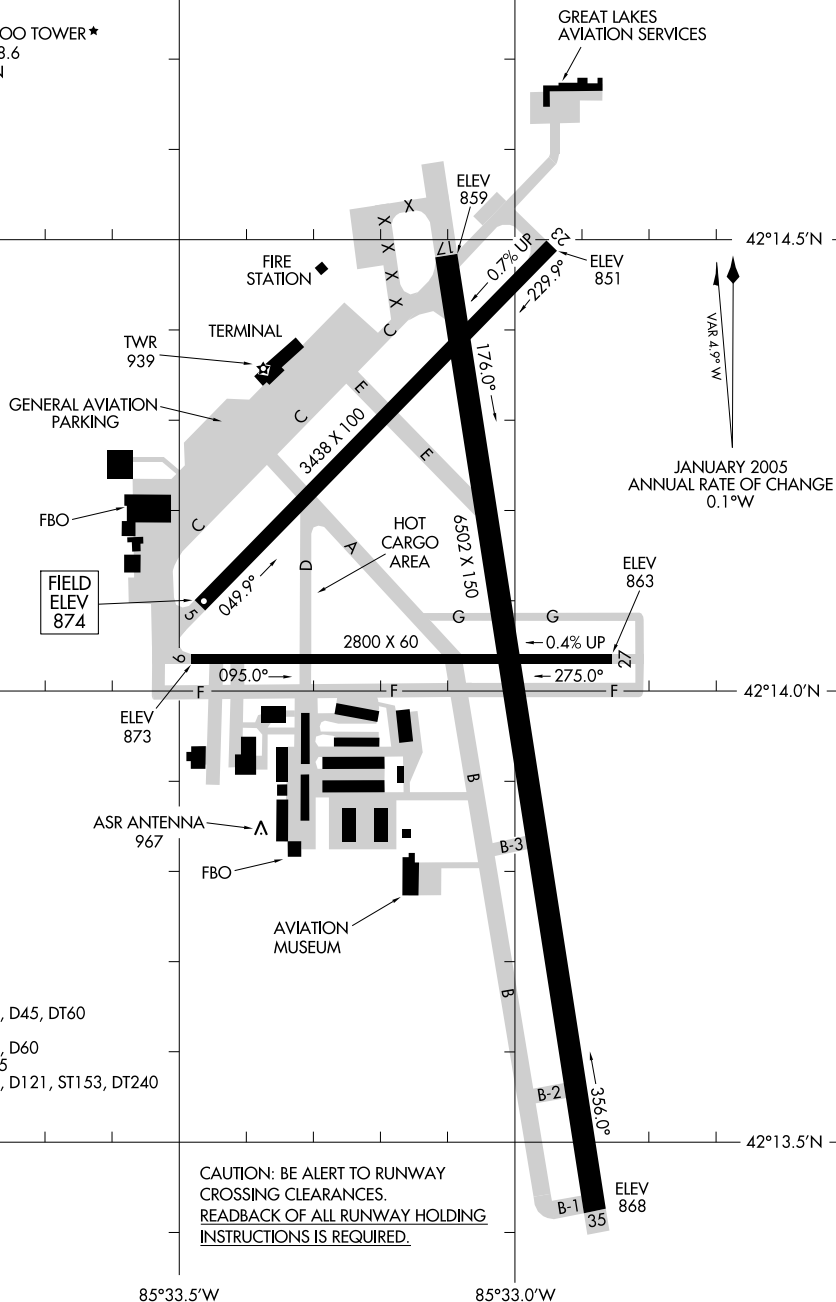
AIRPORT DIAGRAM

AL-717 (FAA)

KALAMAZOO/ BATTLE CREEK INTL (AZO)
KALAMAZOO, MICHIGAN

ATIS
127.25
KALAMAZOO TOWER ★
118.3 308.6
GND CON
121.9
CLNIC DEL
121.75

D



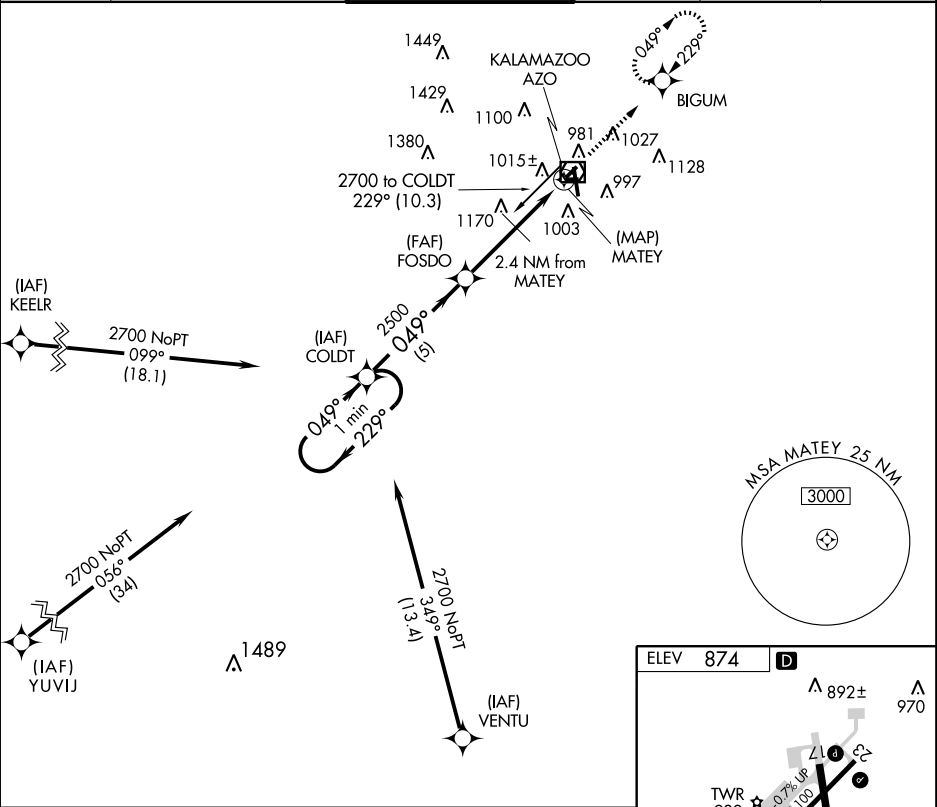
EC-1, 17 DEC 2009 to 14 JAN 2010

APP CRS	Rwy Idg	3438
049°	TDZE	874
	Apt Elev	874

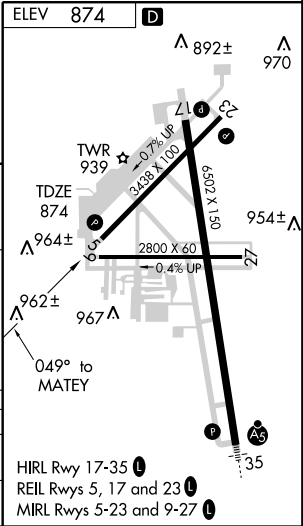
NA ASR When local altimeter setting not received, use Grand Rapids altimeter setting and increase all MDA 120 feet, increase S-5 and Circling Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 2500 direct BIGUM WP and hold.

ATIS	KALAMAZOO APP CON ★	KALAMAZOO TOWER ★	GND CON	CLNC DEL	UNICOM
127.25	121.2 340.9	118.3 (CTAF) 308.6	121.9	121.75	122.95



One Minute Holding Pattern				
2700 ← 229° → 049° →				
COLDT				
FOSDO				
2.4 NM from MATEY				
MATEY				
5 NM 2.6 2.4				
CATEGORY	A	B	C	D
S-5	1320-1	446 (500-1)	1320-1¼ 446 (500-1¼)	NA
CIRCLING	1380-1	506 (600-1)	1380-1½ 506 (600-1½)	NA



APP CRS	Rwy Idg	3438
217°	TDZE	874
	Apt Elev	874

GPS RWY 23

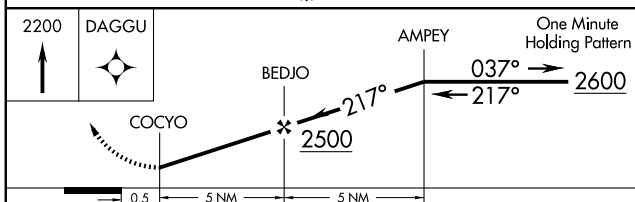
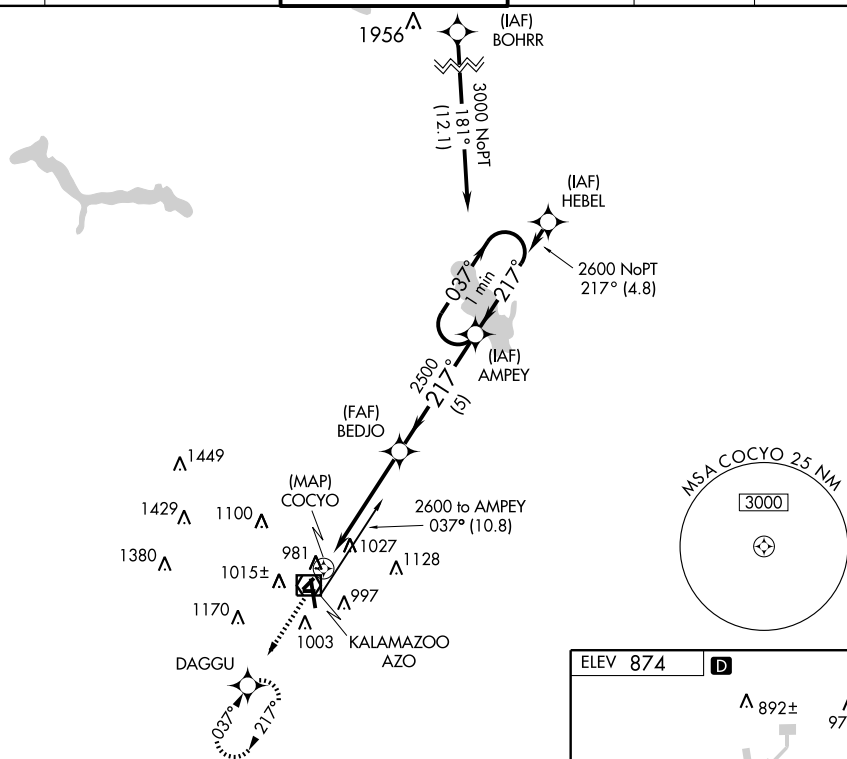
KALAMAZOO/BATTLE CREEK INTL (AZO)



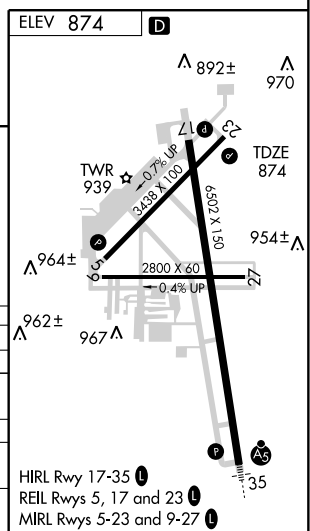
When local altimeter not received,
use Grand Rapids altimeter setting.

MISSED APPROACH: Climb to 2200
direct DAGGU WP and hold.

ATIS 127.25	KALAMAZOO APP CON ★ 121.2 340.9	KALAMAZOO TOWER ★ 118.3 (CTAF) 0 308.6	GND CON 121.9	CLNC DEL 121.75	UNICOM 122.95
-----------------------	---	--	-------------------------	---------------------------	-------------------------





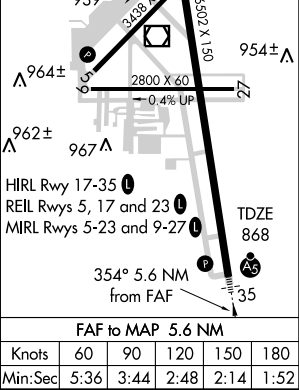
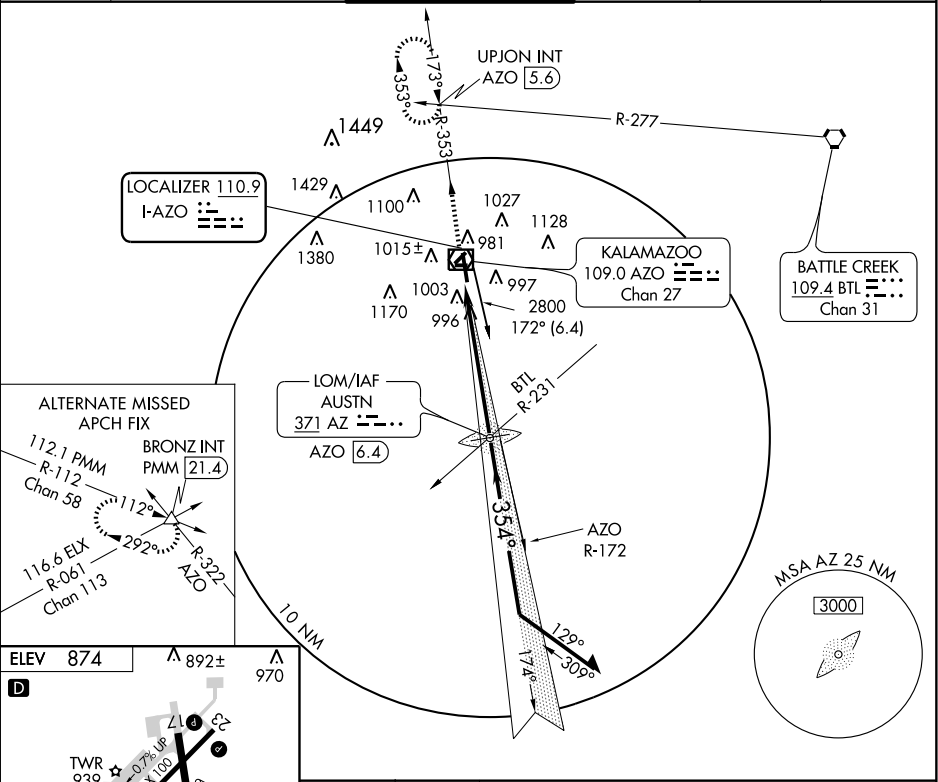
CATEGORY	A	B	C	D
S-23	1300-1	426 (500-1)	1300-1¼	426 (500-1¼)
CIRCLING	1380-1	506 (600-1)	1380-1½ 506 (600-1½)	1440-2 566 (600-2)
GRAND RAPIDS ALTIMETER SETTING MINIMUMS				
S-23	1400-1	526 (600-1)	1400-1½ 526 (600-1½)	1400-1¾ 526 (600-1¾)
CIRCLING	1480-1	606 (700-1)	1480-1¾ 606 (700-1¾)	1480-2 606 (700-2)



LOC I-AZO	APP CRS	Rwy Idg TDZE	6502 868
110.9	354°	Apt Elev	874

ILS or LOC RWY 35
KALAMAZOO/BATTLE CREEK INTL (AZO)

<div> ASR</div> <div>* RVR 1800 authorized with the use of FD or AP or HUD to DA.</div>		<div><div>MALSR</div><div></div></div> <div>MISSED APPROACH: Climb to 2600 via AZO VOR/DME R-353 to UPJON INT/AZO 5.6 DME and hold.</div>			
<div>ATIS</div> <div>127.25</div>	<div>KALAMAZOO APP CON ★</div> <div>121.2 340.9</div>	<div>KALAMAZOO TOWER ★</div> <div>118.3 (CTAF) 0 308.6</div>	<div>GND CON</div> <div>121.9</div>	<div>CLNC DEL</div> <div>121.75</div>	<div>UNICOM</div> <div>122.95</div>



2600

↑

AZO R-353

109.0

UPJON

INT

AUSTIN

LOM/INT

2727

Remain

within 10 NM

174°

2800

354°

2800

GS 2.98°

TCH 53

5.6 NM

CATEGORY	A	B	C	D
S-ILS 35	*1068/24 200 (200-½)			
S-LOC 35	1260/24 392 (400-½)			1260/40 392 (400-¾)
CIRCLING	1380-1	506 (600-1)	1380-1½ 506 (600-1½)	1440-2 566 (600-2)

LOC I-AZO 110.9	APP CRS 174°	Rwy Idg TDZE Apt Elev	6502 867 874
---------------------------	------------------------	-----------------------------	---

LOC BC RWY 17

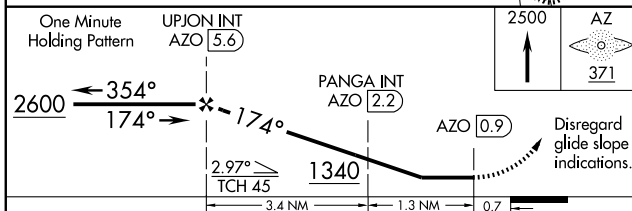
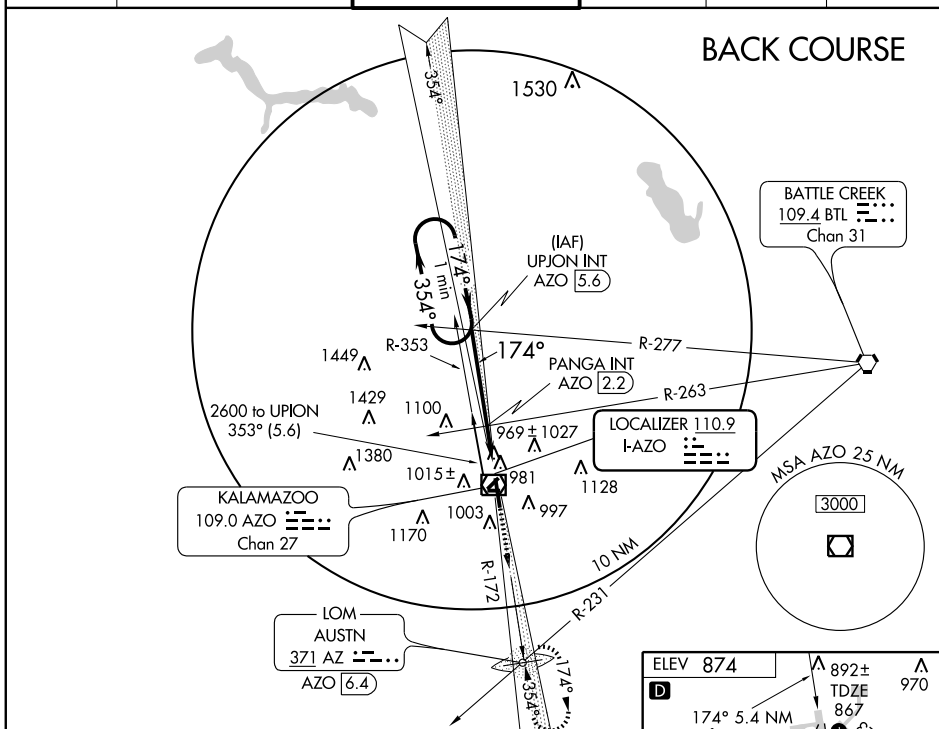
KALAMAZOO/BATTLE CREEK INTL (AZO)



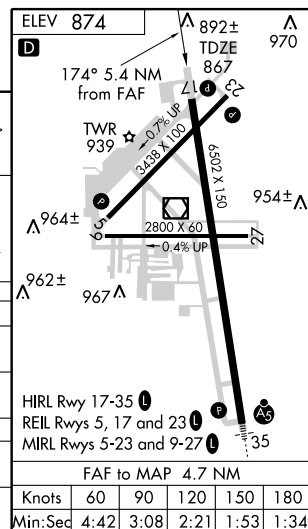
Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 2500 direct
AUSTN LOM/Int/AZO 6.4 DME and hold.

ATIS 127.25	KALAMAZOO APP CON ★ 121.2 340.9	KALAMAZOO TOWER ★ 118.3 (CTAF) 0 308.6	GND CON 121.9	CLNC DEL 121.75	UNICOM 122.95
-----------------------	---	--	-------------------------	---------------------------	-------------------------




CATEGORY	A	B	C	D
S-17	1340-1	473 (500-1)	1340-1¼ 473 (500-1¼)	1340-1½ 473 (500-1½)
CIRCLING	1380-1	506 (600-1)	1380-1½ 506 (600-1½)	1440-2 566 (600-2)
PANGA FIX MINIMUMS				
S-17	1220-1	353 (400-1)	1220-1¼ 353 (400-1¼)	
CIRCLING	1380-1	506 (600-1)	1380-1½ 506 (600-1½)	1440-2 566 (600-2)




NDB RWY 35

KALAMAZOO/BATTLE CREEK INTL (AZO)

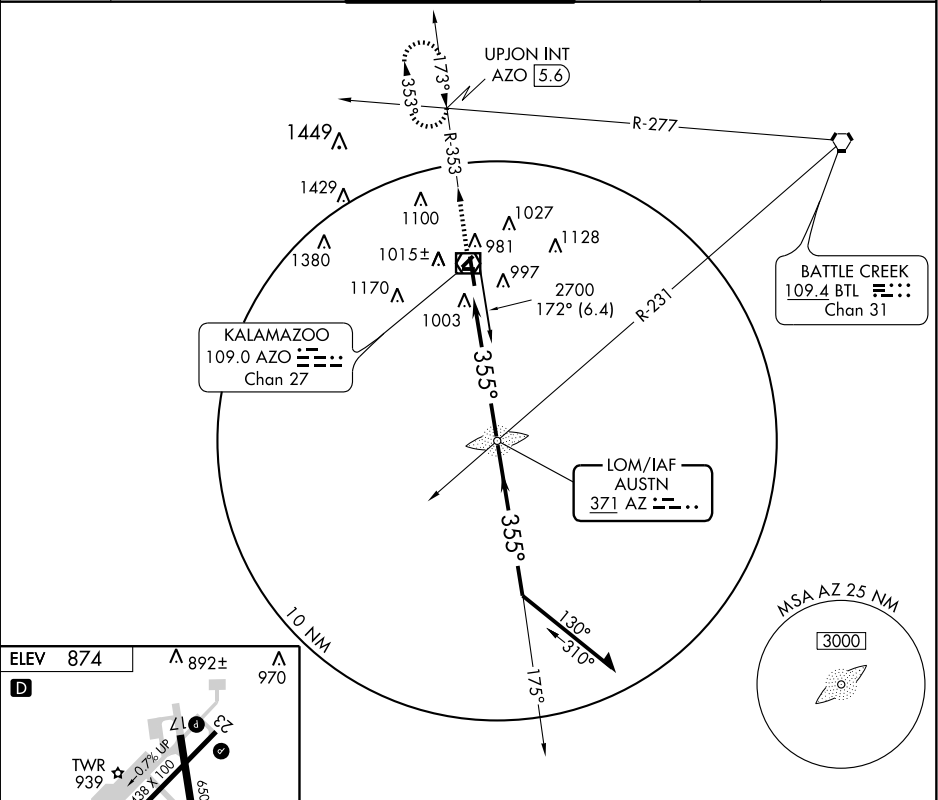
LOM AZ	APP CRS	Rwy Idg	6502
371	355°	TDZE	868
		Apt Elev	874


ASR



MALSR

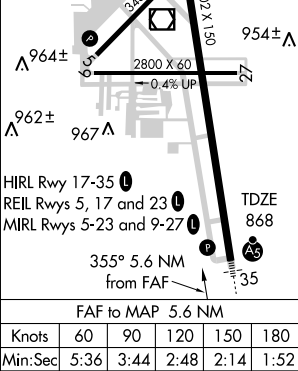
MISSED APPROACH: Climb to 2600 via AZO VOR/DME
R-353 to UPJON Int/AZO 5.6 DME and hold.

ATIS	KALAMAZOO APP CON★	KALAMAZOO TOWER★	GND CON	CLNC DEL	UNICOM
127.25	121.2 340.9	118.3 (CTAF) 308.6	121.9	121.75	122.95



ELEV 874





TWR 939

2438 X 100

6502 X 150

2800 X 60

0.7% Up

0.4% Up

HIRL Rwy 17-35

REIL Rwys 5, 17 and 23

MIRL Rwys 5-23 and 9-27

TDZE 868

355° 5.6 NM from FAF

35

FAF to MAP 5.6 NM

Knots	60	90	120	150	180
Min:Sec	5:36	3:44	2:48	2:14	1:52

2600

UPJON INT

LOM

Remain within 10 NM

175°

355°

2700

2.99°

TCH 53

5.6 NM

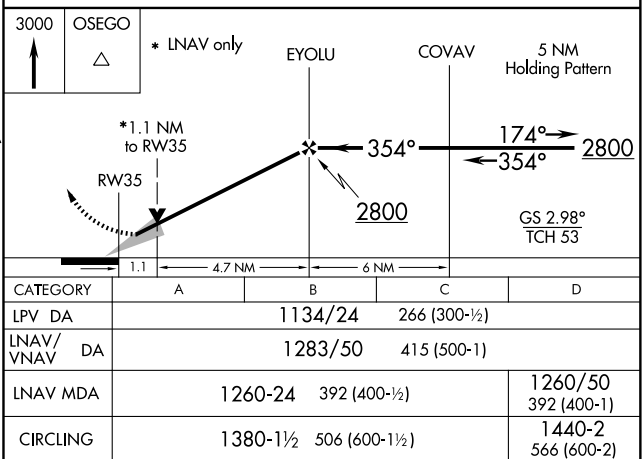
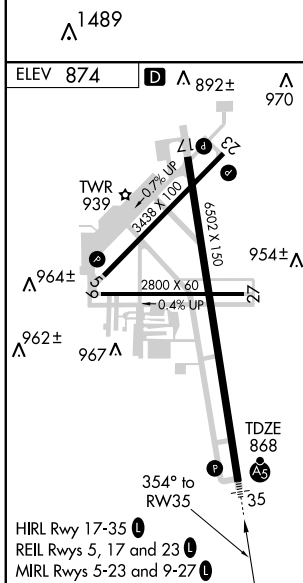
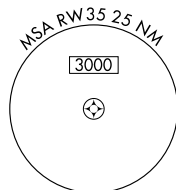
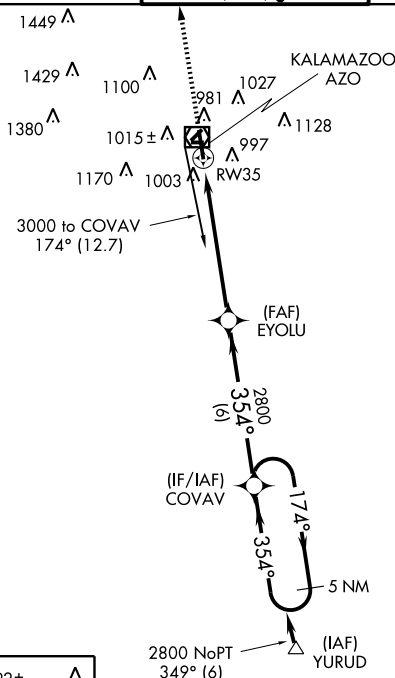
CATEGORY	A	B	C	D
S-35	1320/40 452 (500-¾)			1320/60 452 (500-¼)
CIRCLING	1380-1 506 (600-1)		1380-1½ 506 (600-½) 1440-2 566 (600-2)	

MISSED APPROACH: Climb to 3000 direct OSEGO and hold.

For inoperative MALS, increase LPV all Cats visibility to RVR 5000 and LNAV Cat D visibility to RVR 6000. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 49°C (121°F). DME/DME RNP-0.3 NA.

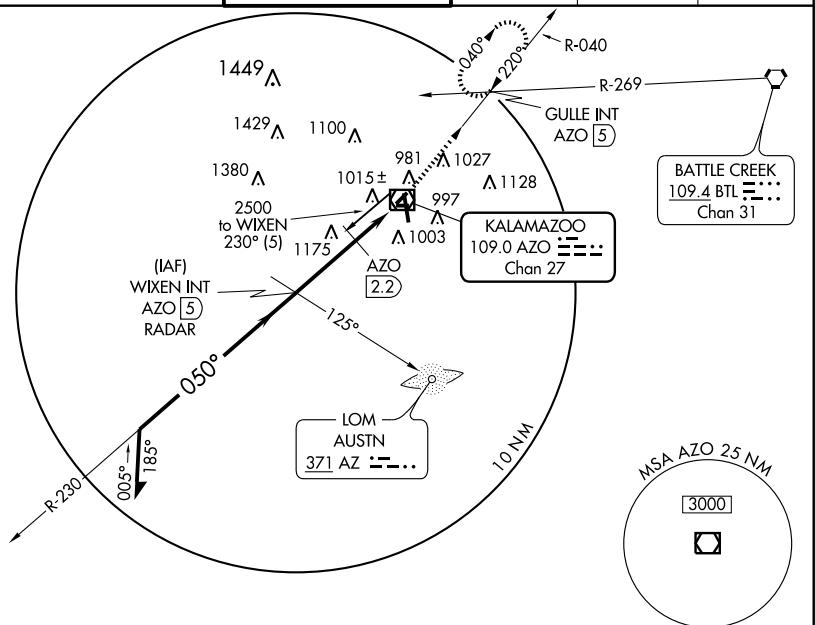
MISSED APCH FIX

Procedure NA for arrivals
on AZO VOR/DME airway
radials 192 CW 232.

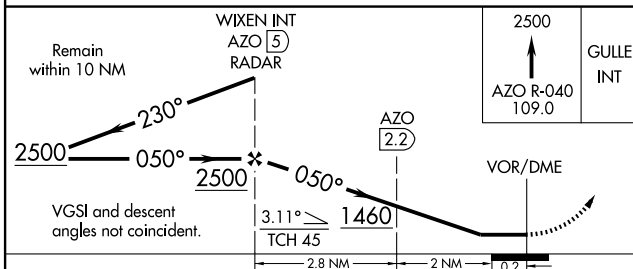


MISSED APPROACH: Climb to 2500 via AZO
R-040 to GULLE Int/AZO 5 DME and hold.

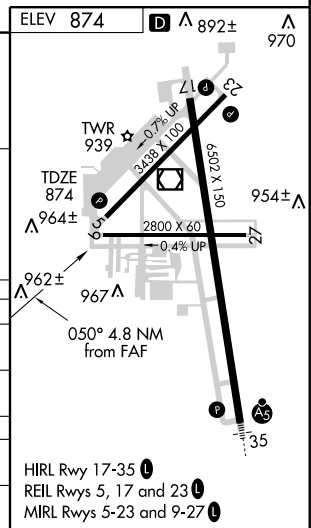
ATIS 127.25	KALAMAZOO APP CON ★ 121.2 340.9	KALAMAZOO TOWER ★ 118.3 (CTAF) 0 308.6	GND CON 121.9	CLNC DEL 121.75	UNICOM 122.95
----------------	------------------------------------	---	------------------	--------------------	------------------



DME, ADF or AZO ASR REQUIRED



CATEGORY	A	B	C	D
S-5	1460-1	586 (600-1)	1460-1½ 586 (600-1½)	NA
CIRCLING	1460-1	586 (600-1)	1460-1½ 586 (600-1½)	NA
DME MINIMUMS				
S-5	1340-1	466 (500-1)	1340-1¼ 466 (500-1¼)	NA
CIRCLING	1340-1	466 (500-1)	1340-1½ 466 (500-1½)	NA



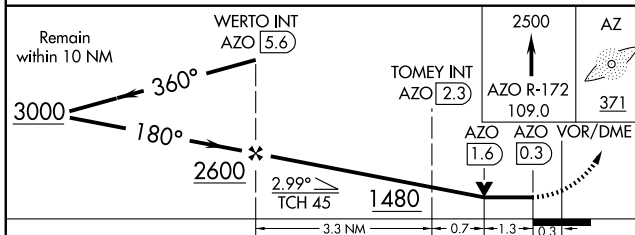
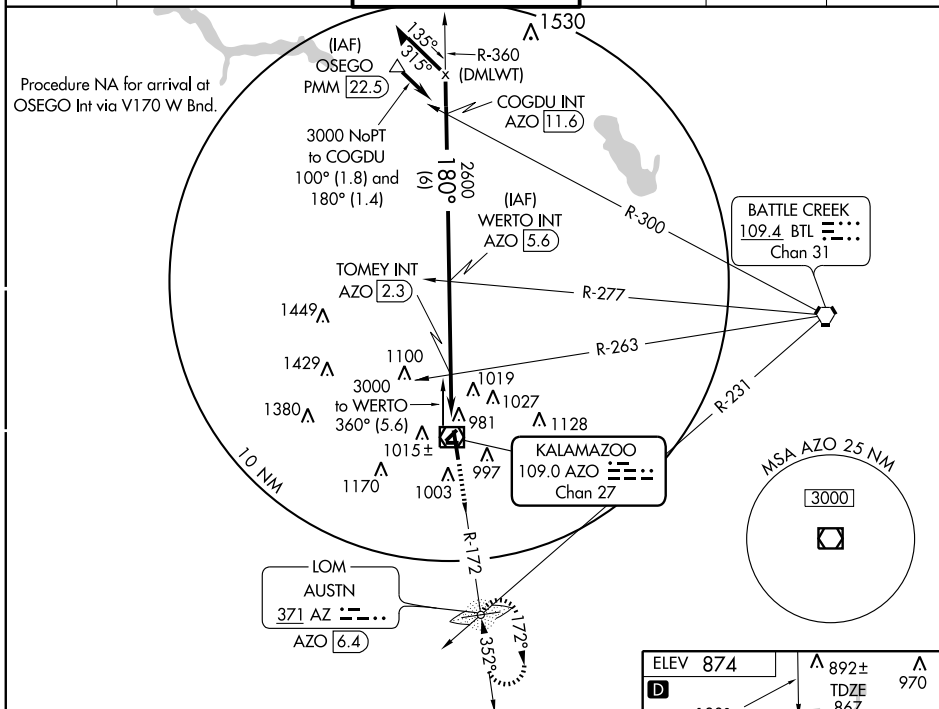
VOR/DME AZO 109.0 Chan 27	APP CRS 180°	Rwy Idg 6502 TDZE 867 Apt Elev 874
---	------------------------	---

VOR RWY 17
KALAMAZOO/BATTLE CREEK INTL (AZO)

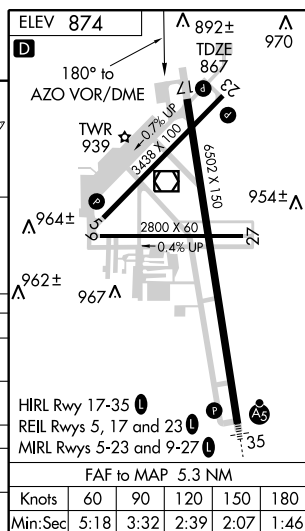
ASR Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 2500 via AZO R-172 to AUSTN LOM/Int/AZO 6.4 DME and hold.

ATIS	KALAMAZOO APP CON ★	KALAMAZOO TOWER ★	GND CON	CLNC DEL	UNICOM
127.25	121.2 340.9	118.3 (CTAF) 0 308.6	121.9	121.75	122.95



CATEGORY	A	B	C	D
S-17	1480-1	613 (700-1)	1480-1 $\frac{3}{4}$ 613 (700-1 $\frac{3}{4}$)	1480-2 613 (700-2)
CIRCLING	1480-1	606 (700-1)	1480-1 $\frac{3}{4}$ 606 (700-1 $\frac{3}{4}$)	1480-2 606 (700-2)
TOMEY FIX MINIMUMS				
S-17	1320-1	453 (500-1)	1320-1 $\frac{1}{4}$ 453 (500-1 $\frac{1}{4}$)	1320-1 $\frac{1}{2}$ 453 (500-1 $\frac{1}{2}$)
CIRCLING	1380-1	506 (600-1)	1380-1 $\frac{1}{2}$ 506 (600-1 $\frac{1}{2}$)	1440-2 566 (600-2)



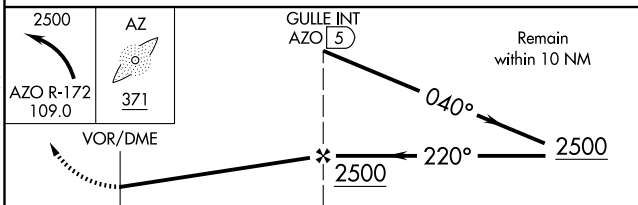
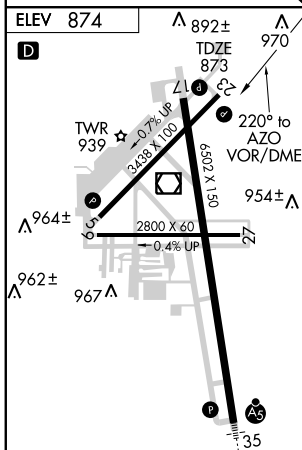
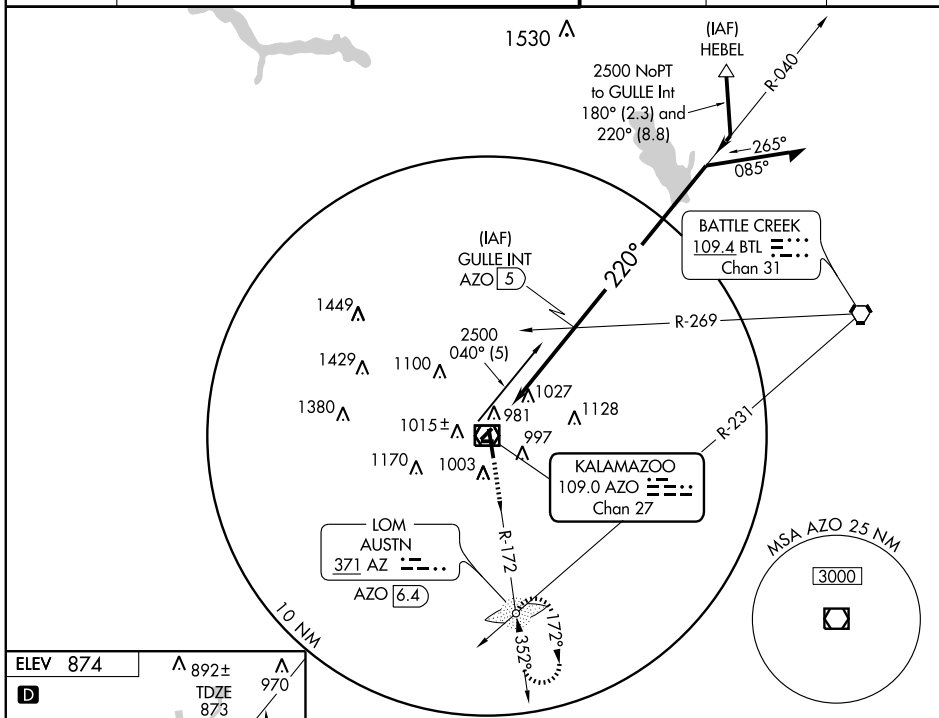
VOR/DME AZO 109.0 Chan 27	APP CRS 220°	Rwy Idg 3438 TDZE 873 Apt Elev 874
---	------------------------	---


VOR RWY 23
KALAMAZOO/BATTLE CREEK INTL (AZO)

T A ASR	When Control Tower closed, except for operators with approved weather reporting service, use South Bend altimeter setting.
-----------------------------	--

MISSED APPROACH: Climbing left turn to 2500 via AZO R-172 to AUSTN LOM/Int/AZO 6.4 DME and hold.

ATIS	KALAMAZOO APP CON ★	KALAMAZOO TOWER ★	GND CON	CLNC DEL	UNICOM
127.25	121.2 340.9	118.3 (CTAF) 0 308.6	121.9	121.75	122.95



				
CATEGORY	A	B	C	D
S-23	1300-1	427 (500-1)	1300-1½ 427 (500-1½)	1300-1½ 427 (500-1½)
CIRCLING	1320-1 446 (500-1)	1340-1 466 (500-1)	1340-1½ 466 (500-1½)	1440-2 566 (600-2)
SOUTH BEND ALTIMETER SETTING MINIMUMS				
S-23	1520-1	647 (700-1)	1520-1¾ 647 (700-1¾)	1520-2 647 (700-2)
CIRCLING	1540-1	666 (700-1)	1560-2 686 (700-2)	1640-2½ 766 (800-2½)

EC-1. 17 DEC 2009 to 14 JAN 2010

HIRL Rwy 17-35 **L**
REIL Rwy 5, 17 and 23 **L**
MIRL Rwy 5-23 and 9-27 **L**

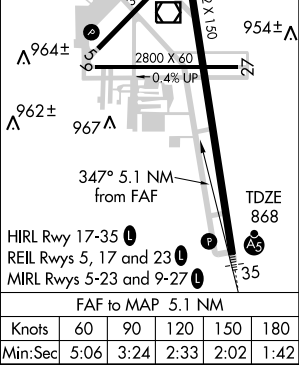
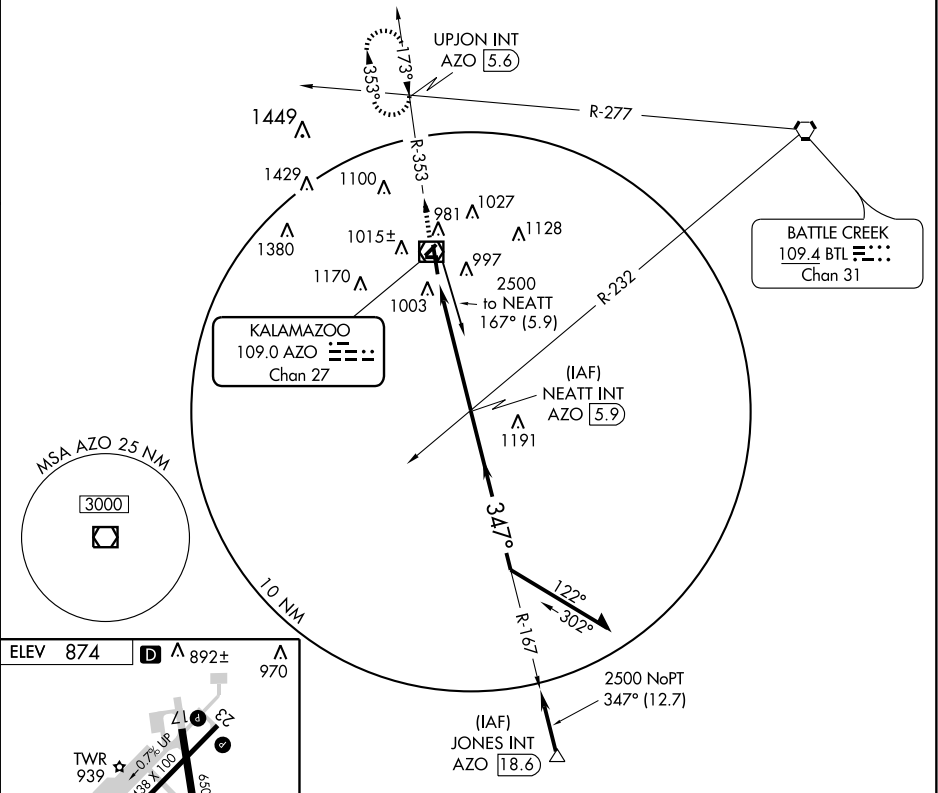
VOR RWY 35

VOR/DME AZO	APP CRS	Rwy Idg	6502
109.0	347°	TDZE	868
Chan 27		Apt Elev	874

KALAMAZOO/BATTLE CREEK INTL (AZO)

 For inoperative MALS, increase S-35 Cat D visibility to RVR 6000.	 MISSED APPROACH: Climb to 2600 via AZO R-353 to UPJON Int/AZO 5.6 DME and hold.
---	---

ATIS 127.25	KALAMAZOO APP CON ★ 121.2 340.9	KALAMAZOO TOWER ★ 118.3 (CTAF) 308.6	GND CON 121.9	CLNC DEL 121.75	UNICOM 122.95
----------------	------------------------------------	---	------------------	--------------------	------------------



2600 AZO R-353 109.0		UPJON INT	NEATT INT AZO 5.9		Remain within 10 NM
AZO 2		AZO 0.8	2500	347°	2500
1.1		4 NM	2.93°	TCH 53	
CATEGORY	A	B	C	D	
S-35	1280/24	412 (500-½)	1280/40 412 (500-¾)	1280/50 412 (500-1)	
CIRCLING	1380-1	506 (600-1)	1380-1½ 506 (600-1½)	1440-2 566 (600-2)	

GPS RWY 9

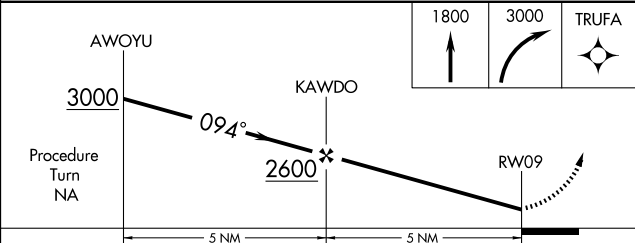
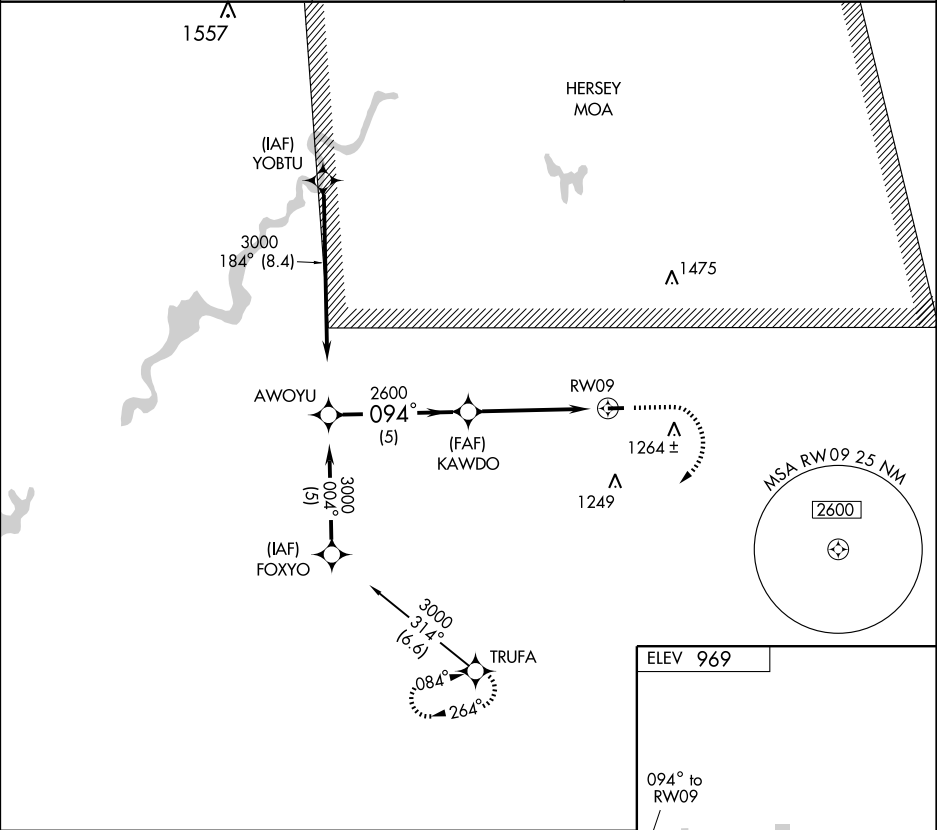
APP CRS	Rwy Idg	3500
094°	TDZE	969
	Apt Elev	969

LAKEVIEW AIRPORT-GRIFFITH FIELD (13C)

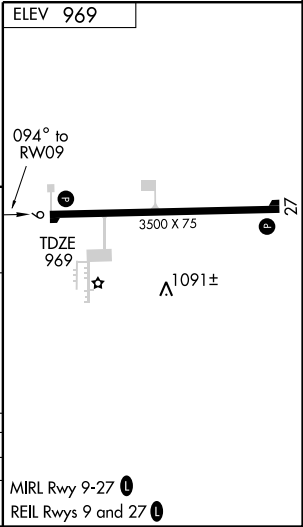
NA Use Roben-Hood altimeter setting.

MISSED APPROACH: Climb to 1800, then climbing right turn to 3000 direct TRUFA WP and hold.

ROBEN-HOOD AWOS-3 121.125	GRAND RAPIDS APP CON ★ 124.6 257.6	UNICOM 122.8(CTAF) 0
------------------------------	---------------------------------------	-------------------------



CATEGORY	A	B	C	D
S-9	1400-1	431 (500-1)	NA	
CIRCLING	1440-1 471 (500-1)	1580-1 611 (700-1)	NA	



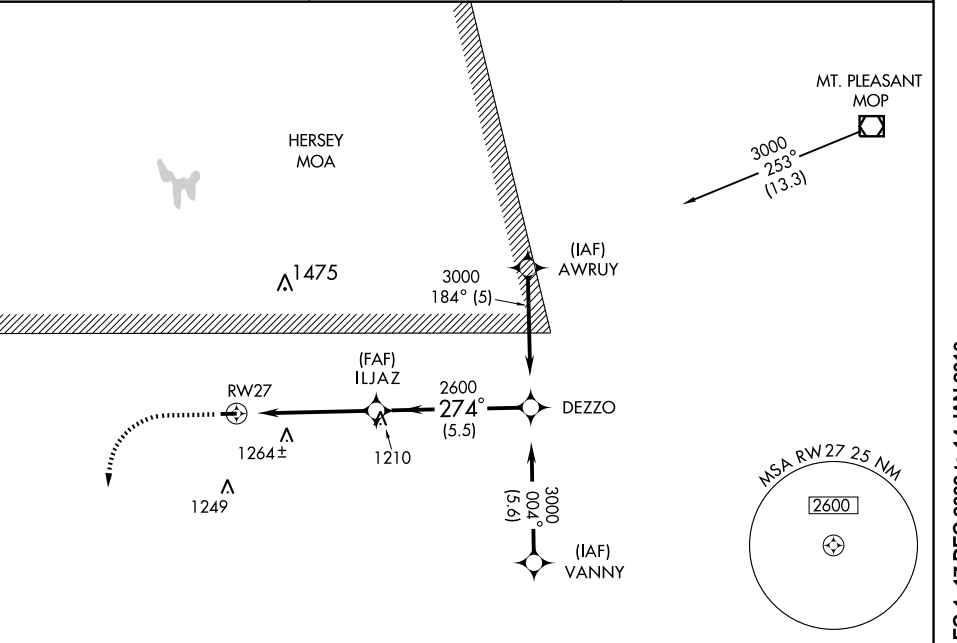
MIRL Rwy 9-27 0
REIL Rwy 9 and 27 0

NA

Use Roben-Hood altimeter setting.

MISSED APPROACH: Climb to 1800, then climbing left turn to 3000 direct TRUFA WP and hold.

ROBEN-HOOD AWOS-3 121.125	GRAND RAPIDS APP CON * 124.6 257.6	UNICOM 122.8 (CTAF) 0
------------------------------	---------------------------------------	--------------------------



ELEV 969

CATEGORY	A	B	C	D
S-27	1460-1	491 (500-1)	NA	
CIRCLING	1460-1 491 (500-1)	1580-1 611 (700-1)	NA	

MIRL Rwy 9-27 0

REIL Rws 9 and 27 0

EC-1.17 DEC 2009 to 14 JAN 2010

VOR/DME HIC 117.6 Chan 123	APP CRS 112°	Rwy Idg 3500 TDZE 969 Apt Elev 969
--	------------------------	---

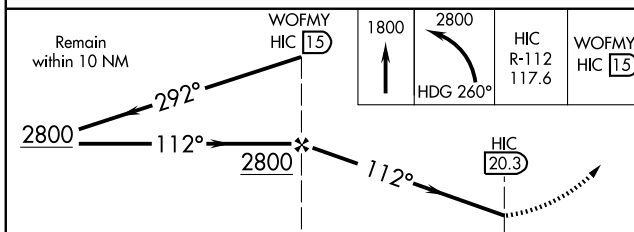
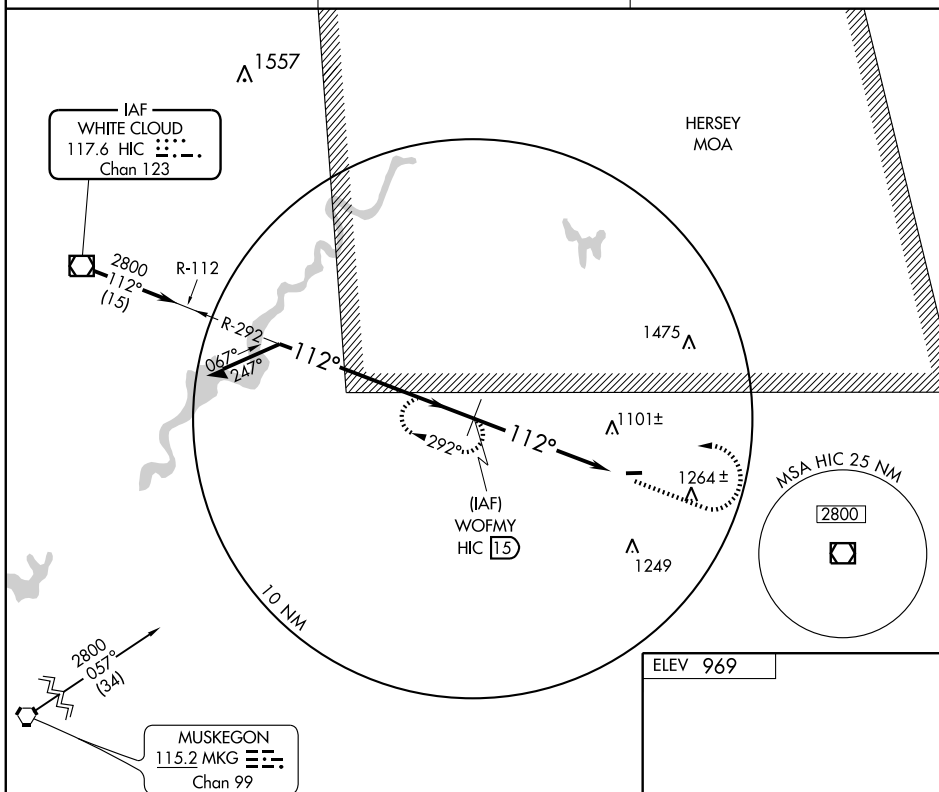
VOR/DME RWY 9
LAKEVIEW AIRPORT-GRIFFITH FIELD (13C)

T
A NA Use Roben-Hood altimeter setting.

MISSED APPROACH: Climb to 1800, then climbing left turn to 2800 via heading 260° and HIC VOR/DME R-112 to WOFMY and hold.

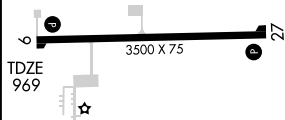
ROBEN-HOOD AWOS-3
121.125

GRAND RAPIDS APP CON ★
124.6 257.6

UNICOM
122.8 (CTAF) 

CATEGORY		A	B	C	D
S-9	1400-1 431 (500-1)	1400-1½ 431 (500-1¼)		NA	
CIRCLING	1440-1 471 (500-1)	1580-1½ 611 (700-1¼)		NA	

ELEV 969



MIRL Rwy 9-27 **L**
REIL Rwy 9 and 27 **L**

Knots	60	90	120	150	180
Min:Sec					



Use Toledo Express altimeter setting.

MISSED APPROACH: Climbing left turn to 2500 via VWV R-360 to VWV VOR/DME and hold.

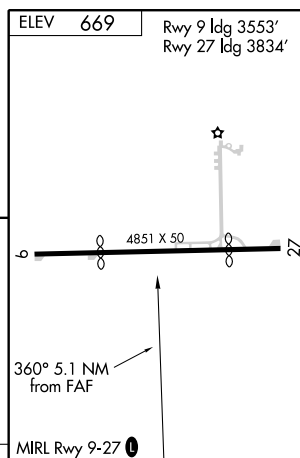
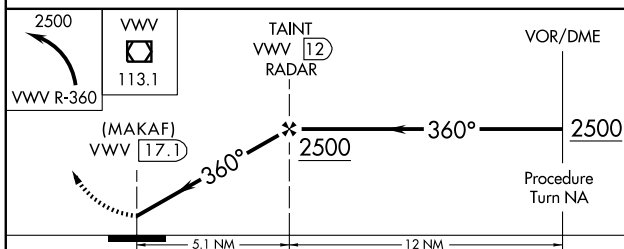
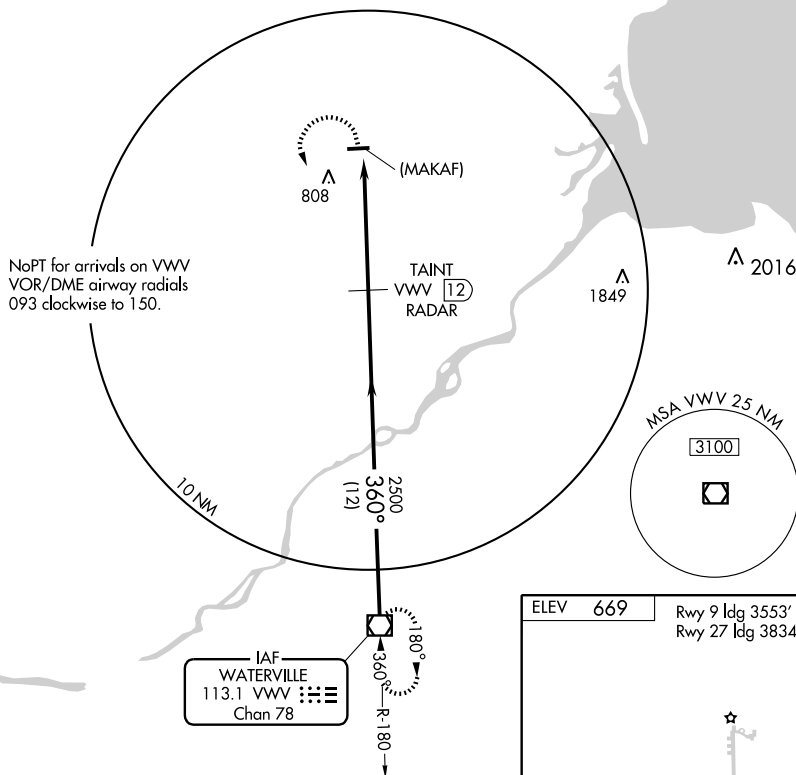
AWOS-3
119,175

TOLEDO APP CON
134.35 317.55

GCO
121,725

UNICOM
122.7 (CTAF) **L**

DME or RADAR REQUIRED

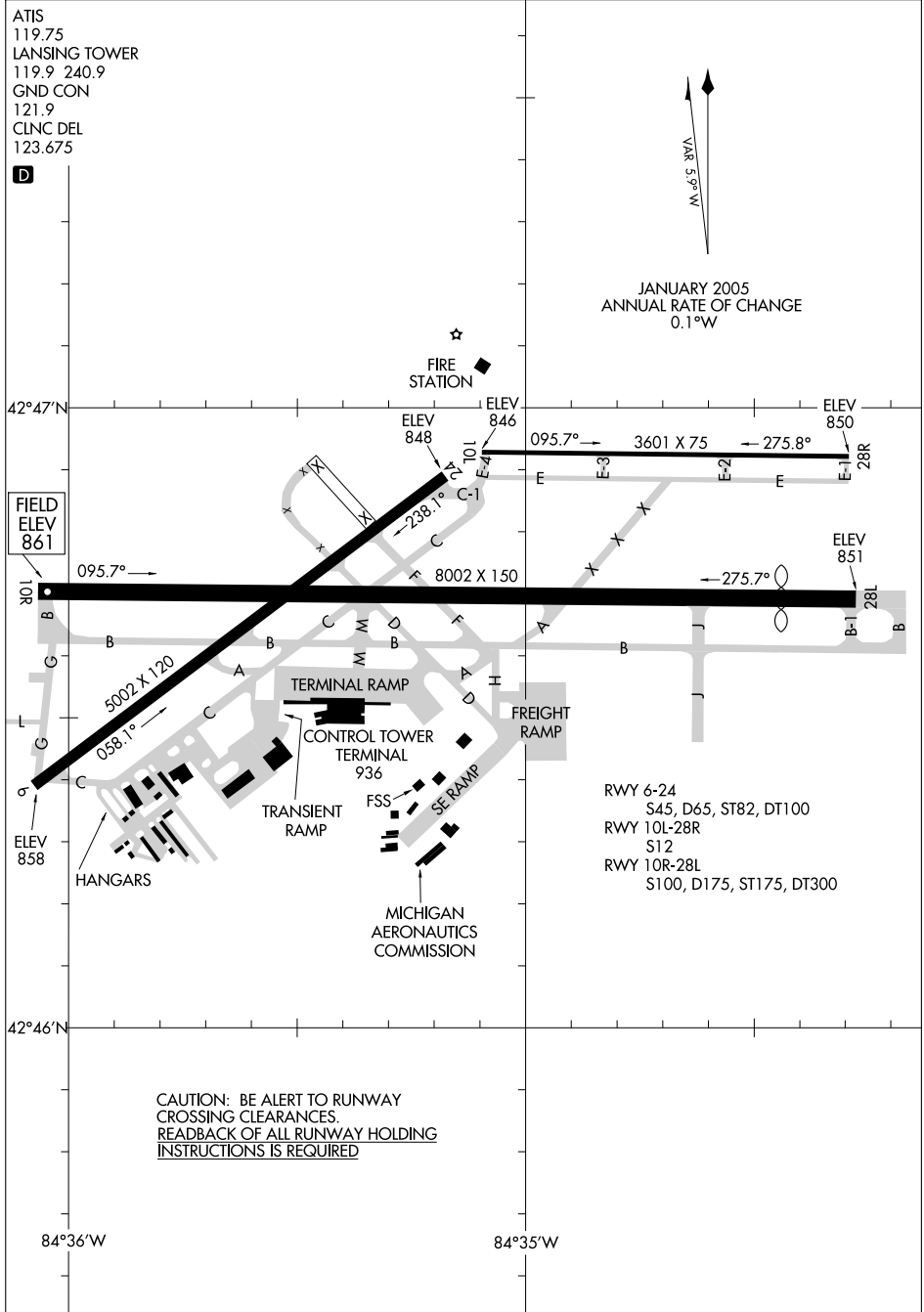


CATEGORY	A	B	C	D	FAF to MAP 5.1 NM					
CIRCLING	1160-1 496 (500-1)		1160-1½ 496 (500-1½)	NA	Knots	60	90	120	150	180
					Min:Sec	5:06	3:24	2:33	2:02	1:42

AIRPORT DIAGRAM

AL-224 (FAA)

LANSING/ CAPITAL CITY (L.AN)
LANSING, MICHIGAN



LOC I-CPQ	APP CRS	Rwy Idg	7251
<u>111.7</u>	096°	TDZE	861
		Apt Elev	861

ILS or LOC RWY 10R
LANSING/ CAPITAL CITY (LAN)

T *RVR 1800 authorized with the use of FD or AP or HUD to DA.

MALSR

MISSED APPROACH: Climb to 3000 via heading 096°, then right turn direct LAN VORTAC and hold.

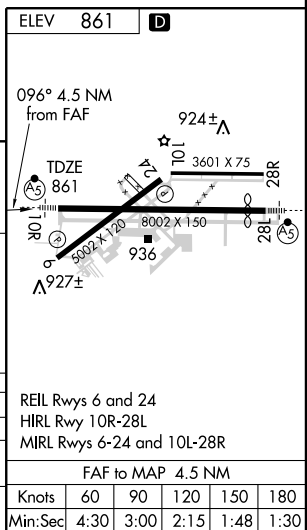
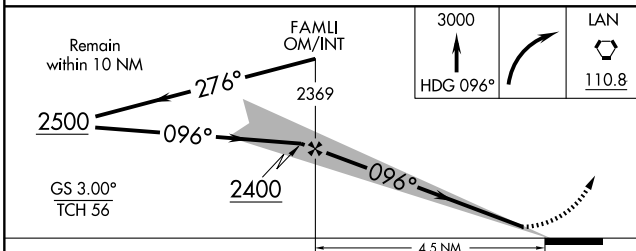
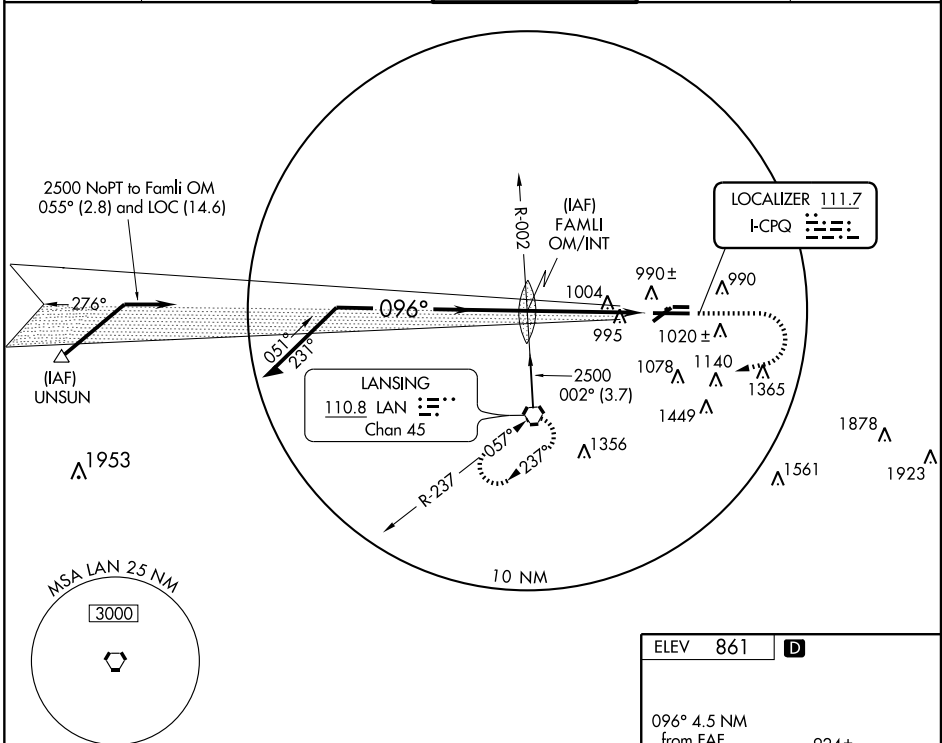
ATIS
119.75

LANSING APP CON
133.475 226.4 (NORTH)
118.65 226.4 (SOUTH)

LANSING TOWER
119.9 240.9

GND CON
121.9

CLNC DEL
123.675



LOC/DME I-LAN	APP CRS	Rwy Idg	7251
110.1	276°	TDZE	851
Chan 38		Apt Elev	861

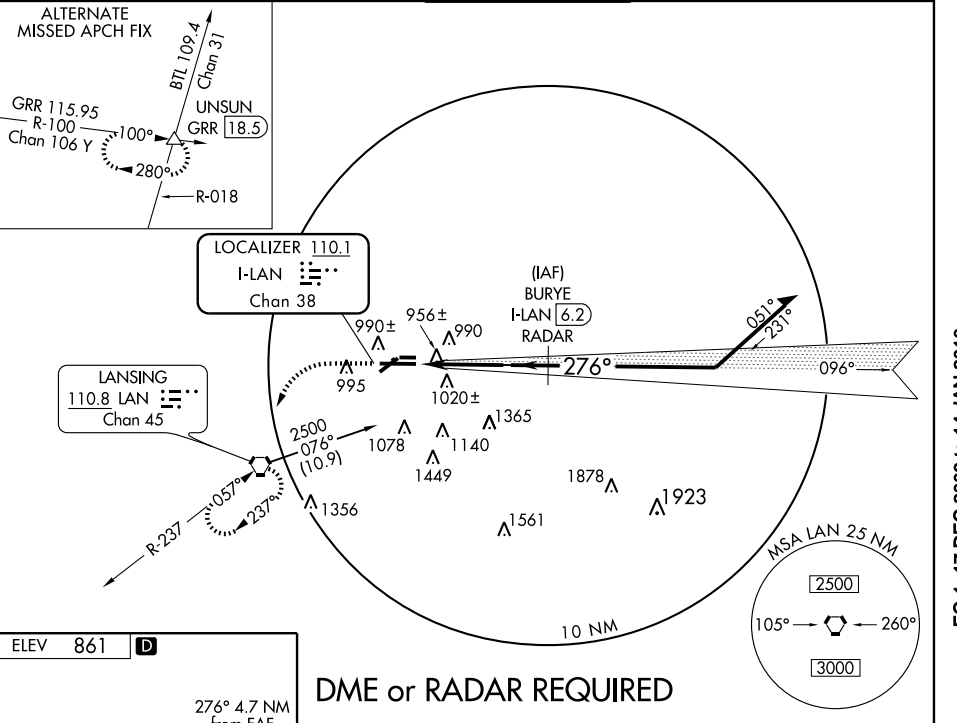
ASR

DME or RADAR REQUIRED

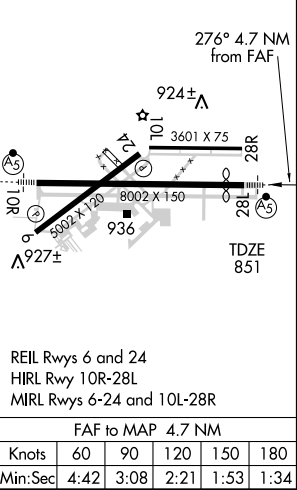
MALSR

MISSED APPROACH: Climb to 2500, then left turn direct LAN VORTAC and hold.

ATIS	LANSING APP CON	LANSING TOWER	GND CON	CLNC DEL
119.75	133.475 226.4 (NORTH)	119.9 240.9	121.9	123.675
	118.65 226.4 (SOUTH)			



ELEV 861	D
----------	---



DME or RADAR REQUIRED

2500

LAN 110.8

6000

BURYE I-LAN 6.2 RADAR

2400

096°

2500

276°

2400

GS 3.00° TCH 52

1.2

3.4 NM

CATEGORY	A	B	C	D
S-ILS 28L	1051/24 200 (200-½)			
S-LOC 28L	1300/24 449 (500-½)		1300/40 449 (500-¾)	
CIRCLING	1380-1 519 (600-1)		1380-1½ 519 (600-½) 1440-2 579 (600-2)	

EC-1. 17 DEC 2009 to 14 JAN 2010

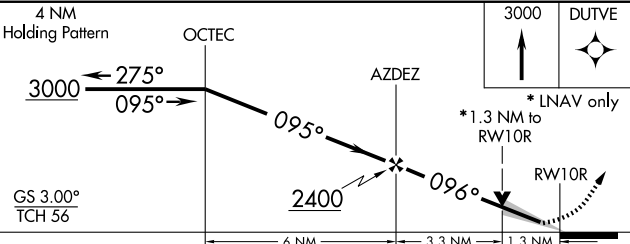
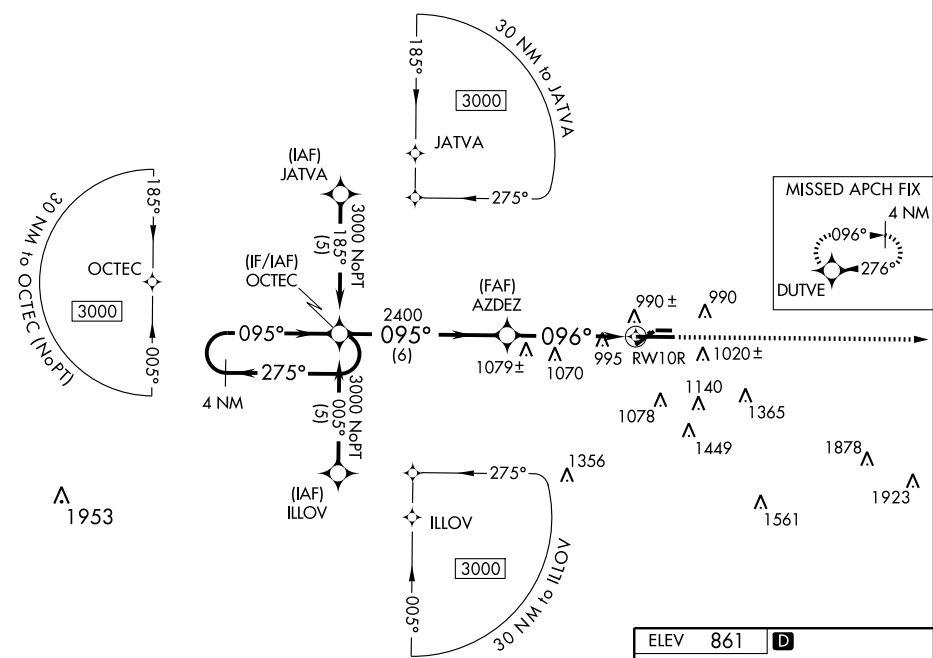
ASR

For uncompensated Baro-VNAV systems, LNAV/VNAV
NA below -16°C (4°F) or above 47°C (116°F).
DME/DME RNP-0.3 NA.

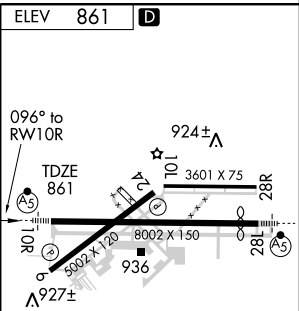
MALSR

MISSED APPROACH: Climb to
3000 direct DUTVE and hold.

ATIS 119.75	LANSING APP CON 133.475 226.4 (NORTH) 118.65 226.4 (SOUTH)	LANSING TOWER 119.9 240.9	GND CON 121.9	CLNC DEL 123.675
----------------	--	------------------------------	------------------	---------------------



CATEGORY	A	B	C	D
LPV DA	1061/24	200 (200-½)		
LNAV/VNAV DA	1290/50	429 (500-1)		
LNAV MDA	1320/24 459 (500-½)	1320/40 459 (500-¾)	1320/50 459 (500-1)	
CIRCLING	1380-1 519 (600-1)	1380-1½ 519 (600-1½)	1440-2 579 (600-2)	



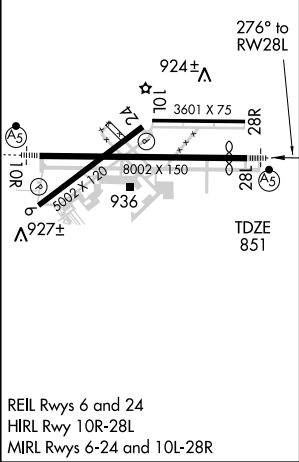
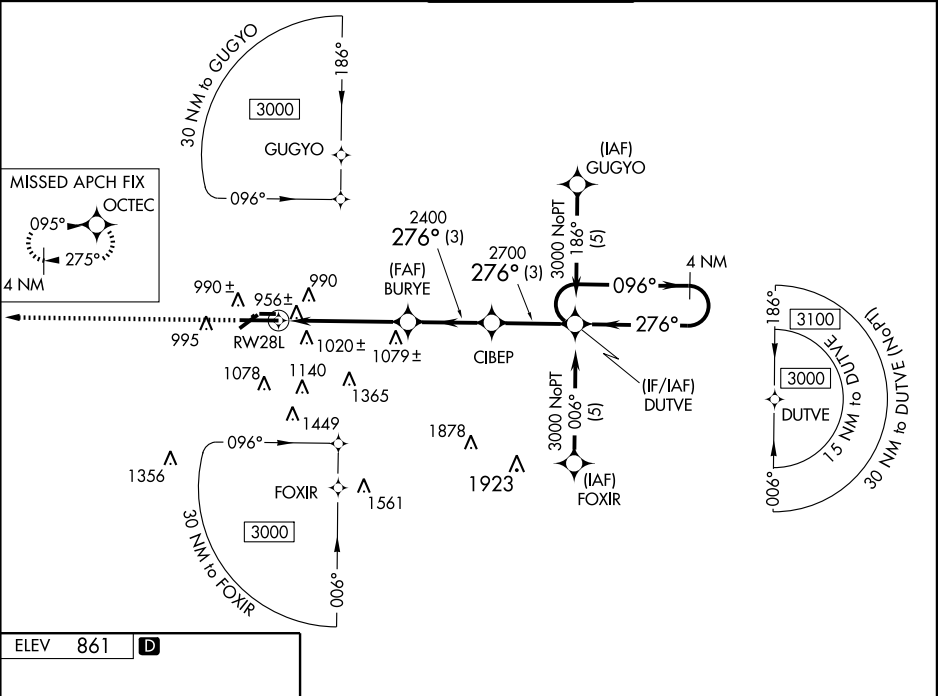
REIL Rwy 6 and 24
HIRL Rwy 10R-28L
MIRL Rwy 6-24 and 10L-28R

WAAS CH 40414 W28A	APP CRS 276°	Rwy Idg TDZE Apt Elev	7251 851 861
--	------------------------	-----------------------------	---

RNAV (GPS) RWY 28L
LANSING/CAPITAL CITY (LAN)

ASR For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.	MALSR 	MISSED APPROACH: Climb to 3000 direct OCTEC and hold.
---	--	--

ATIS 119.75	LANSING APP CON 133.475 226.4 (NORTH) 118.65 226.4 (SOUTH)	LANSING TOWER 119.9 240.9	GND CON 121.9	CLNC DEL 123.675
-----------------------	--	-------------------------------------	-------------------------	----------------------------



3000

↑

OCTEC

4 NM Holding Pattern

DUTVE

096° →

← 276°

3000

*LNAV only

*1.2 NM to RW28L

BURYE

276°

2700

2400

RW28L

1.2

3.5 NM

3 NM

3 NM

GS 3.00°

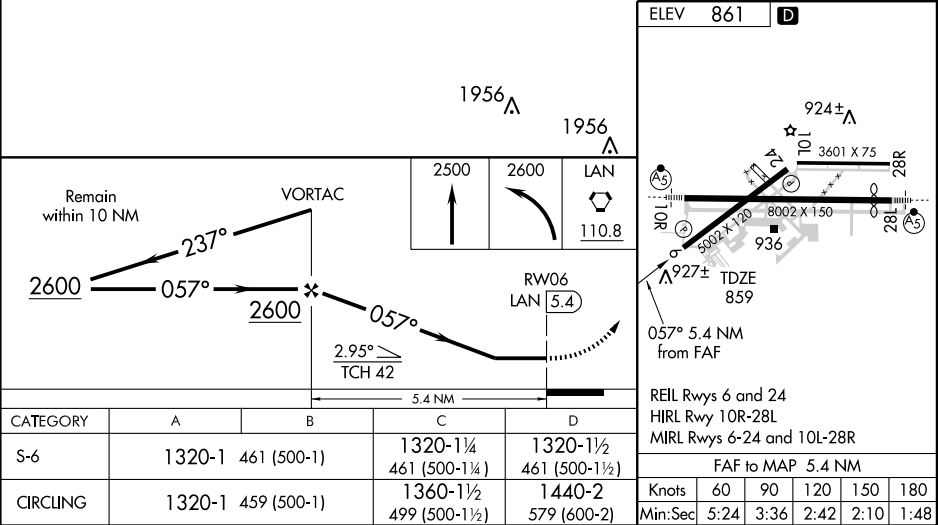
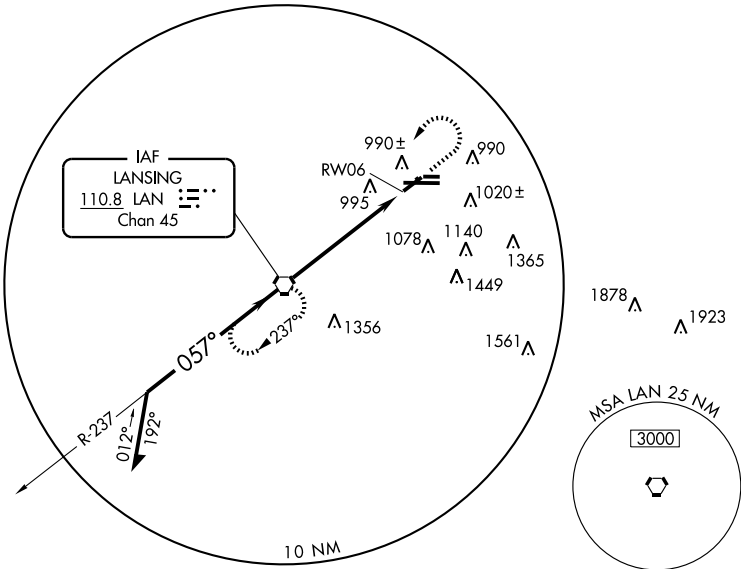
TCH 52

CATEGORY	A	B	C	D
LPV DA	1051/24 200 (200-½)			
LNAV/VNAV DA	1370/60 519 (600-1¼)			
LNAV MDA	1280/24	429 (500-½)	1280/40 429 (500-¾)	1280/50 429 (500-1)
CIRCLING	1380-1	519 (600-1)	1380-1½ 519 (600-1½)	1440-2 579 (600-2)

VORTAC LAN 110.8 Chan 45	APP CRS 057°	Rwy Idg TDZE 5002 Apt Elev 859
--	------------------------	--

VOR or GPS RWY 6
LANSING/CAPITAL CITY (LAN)

V ASR		MISSED APPROACH: Climb to 2500, then climbing left turn to 2600 direct LAN VORTAC and hold.		
ATIS 119.75	LANSING APP CON 133.475 226.4 (NORTH) 118.65 226.4 (SOUTH)	LANSING TOWER 119.9 240.9	GND CON 121.9	CLNC DEL 123.675

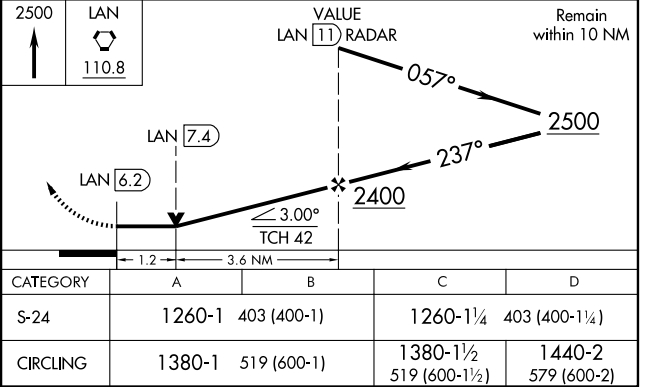
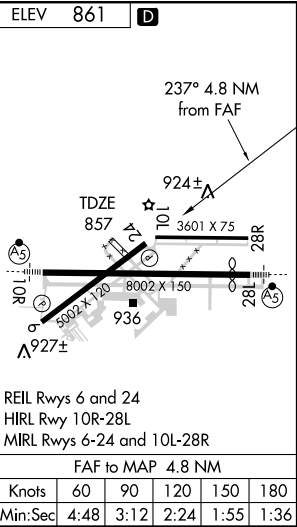
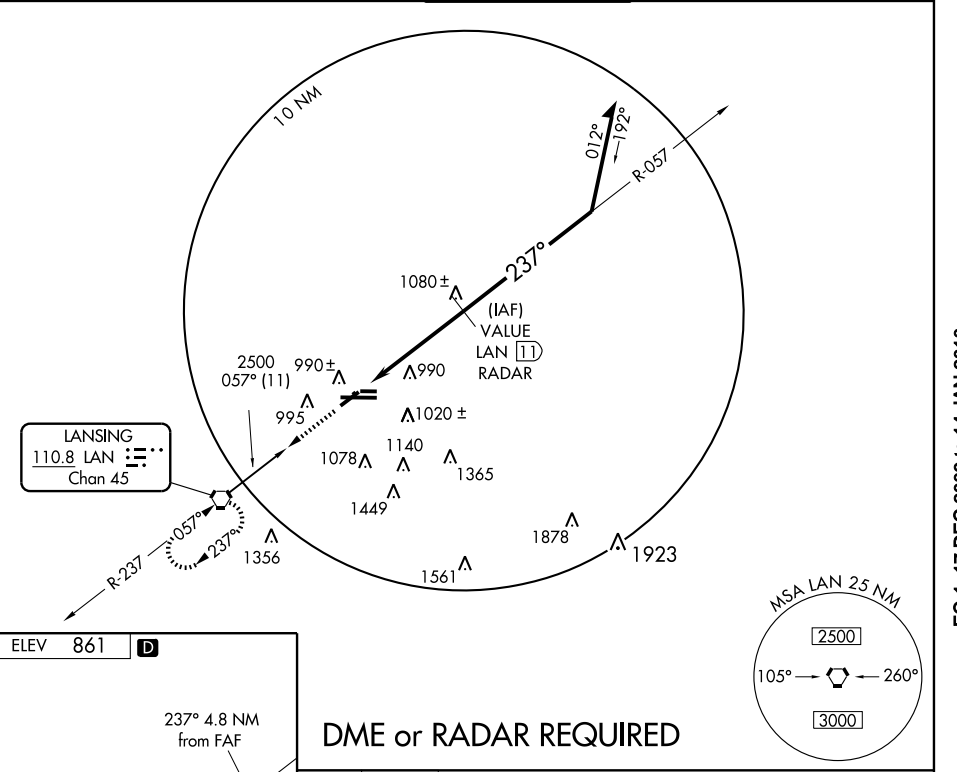


ASR

DME or RADAR Required.
Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 2500 direct
LAN VORTAC and hold.

ATIS	LANSING APP CON	LANSING TOWER	GND CON	CLNC DEL
119.75	133.475 226.4 (NORTH) 118.65 226.4 (SOUTH)	119.9 240.9	121.9	123.675

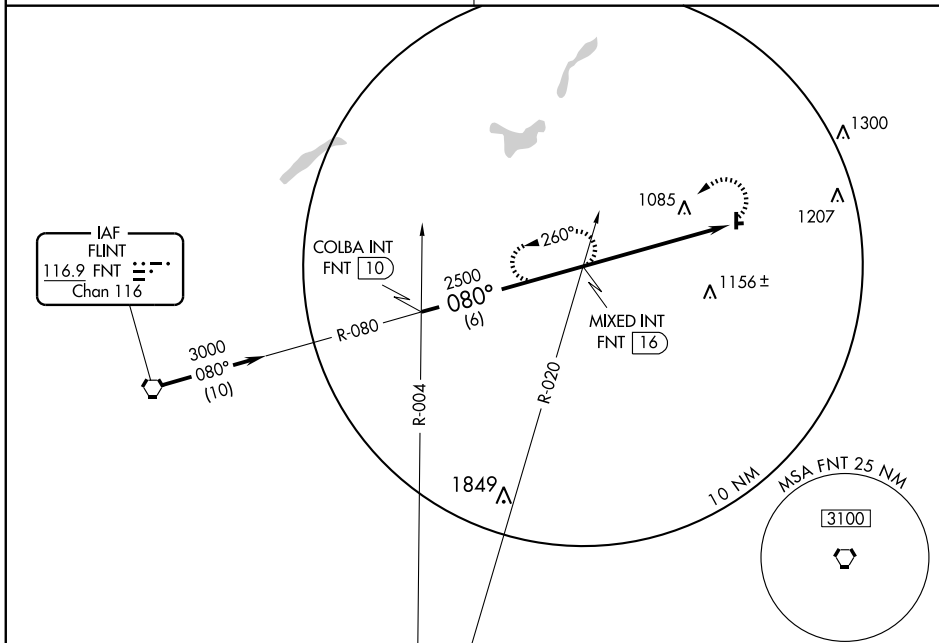


VORTAC FNT 116.9 Chan 116	APP CRS 080°	Rwy Idg TDZE Apt Elev	N/A N/A 844
---	------------------------	-----------------------------	--

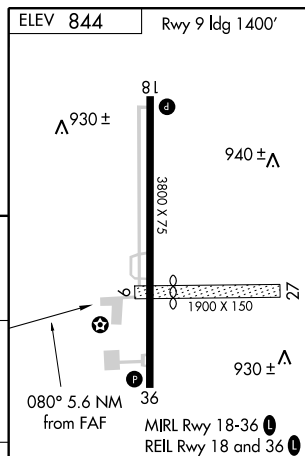
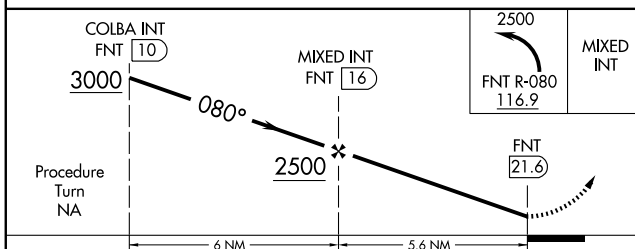
VOR-A

LAPEER/ DUPONT-LAPEER (D95)

Use Flint altimeter setting. NA	MISSED APPROACH: Climbing left turn to 2500 via FNT R-080 to MIXED INT/FNT 16 DME and hold.
FLINT APP CON ★ 118.8 257.9	UNICOM 123.0 (CTAF) 0



CAUTION: NE/SW drag strip
2 miles North of Airport.



CATEGORY	A	B	C	D	FAF to MAP 5.6 NM					
CIRCLING	1460-1 616 (700-1)	1460-1¼ 616 (700-1¼)	1460-1¾ 616 (700-1¾)	NA	Knots	60	90	120	150	180
					Min:Sec	5:36	3:44	2:48	2:14	1:52

APP CRS	Rwy Idg	3732
095°	TDZE	919
	Apt Elev	920

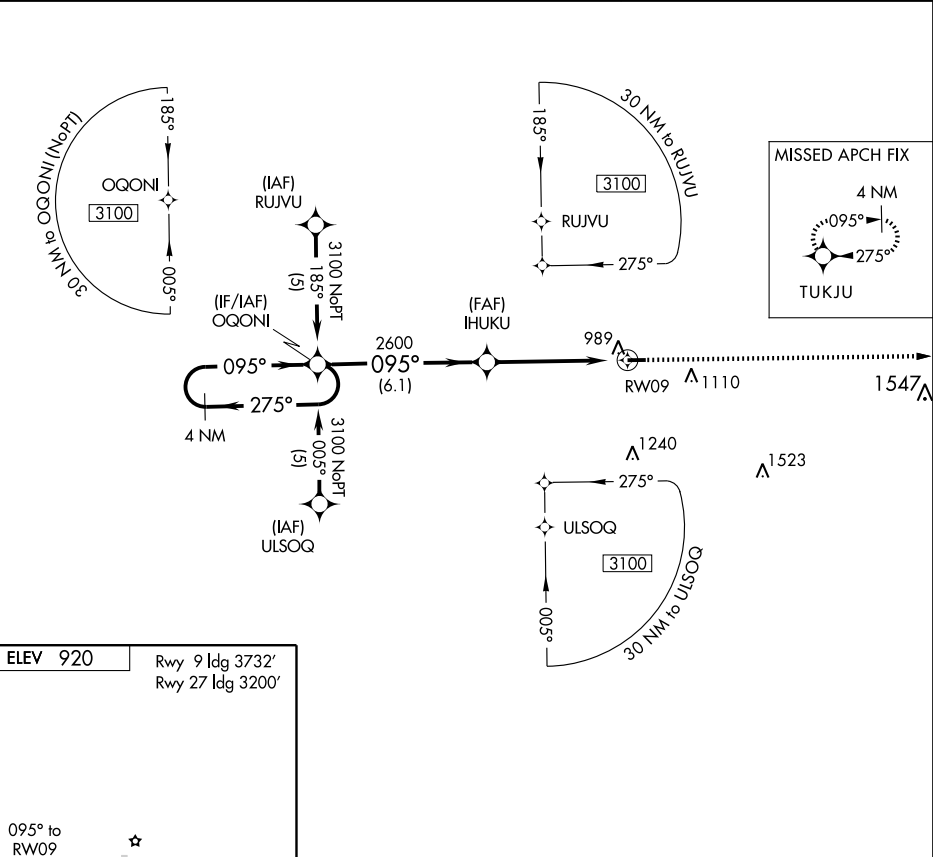
RNAV (GPS) RWY 9

LINDEN/ PRICE'S (9G2)

NA Use Flint altimeter setting; when not received, use Howell altimeter setting. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 2900 direct TUKJU and hold.

FLINT ASOS 133.15	FLINT APP CON ★ 118.8 257.9	UNICOM 123.0 (CTAF) 0
----------------------	--------------------------------	---------------------------------



ELEV 920

Rwy 9 Idg 3732'
Rwy 27 Idg 3200'

095° to RW09

TDZE 919

4000 X 75

0.3% UP

REIL Rwy 9 **0**

MIRL Rwy 9-27 **0**

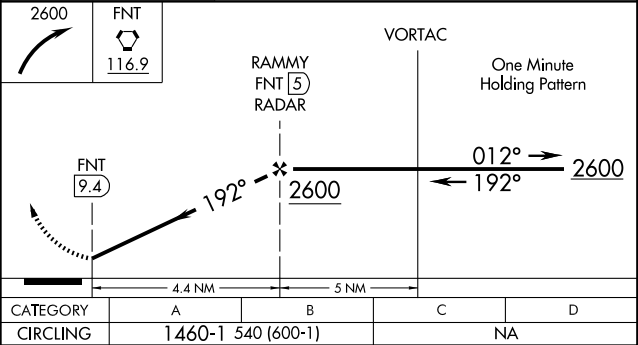
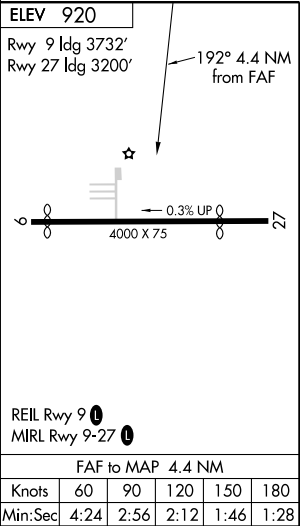
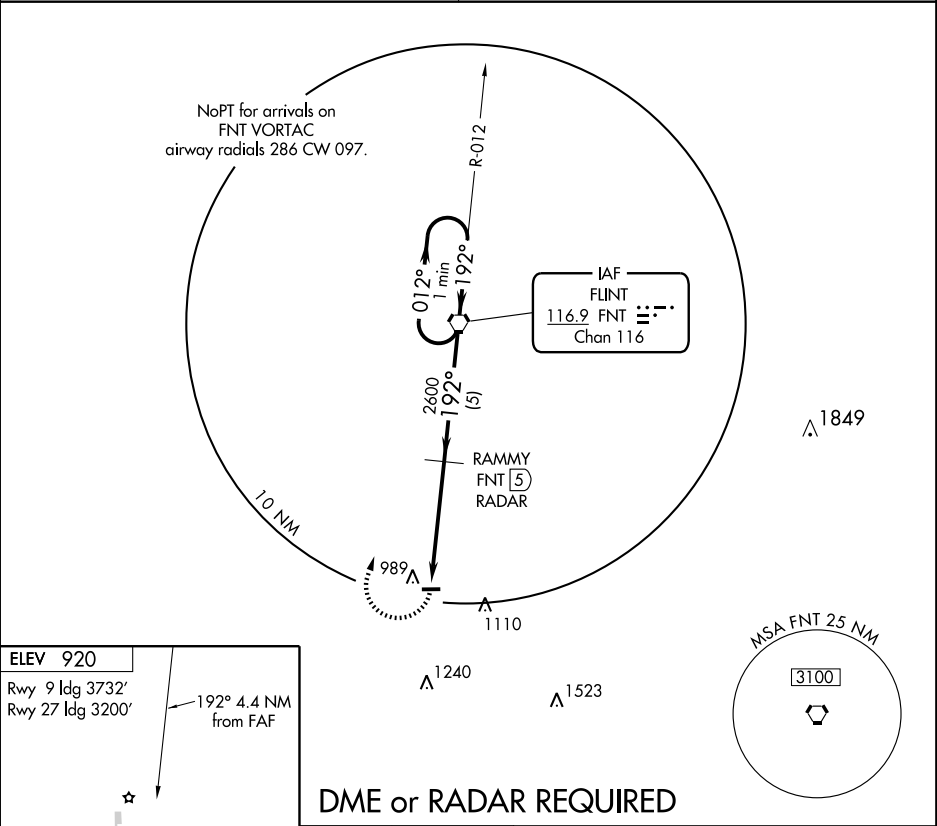
<div><div>OQONI</div><div>IHUKU</div><div>RW09</div></div>			
<div><div>3100</div><div>2600</div><div>2900</div><div>TUKJU</div></div>			
<div><div>4 NM Holding Pattern</div><div>6.1 NM</div><div>5.1 NM</div></div>			
CATEGORY	A	B	C D
LNAV MDA	1400-1	481 (500-1)	NA
CIRCLING	1460-1	540 (600-1)	NA

VORTAC FNT 116.9 Chan 116	APP CRS 192°	Rwy Idg TDZE Apt Elev	N/A N/A 920
---	------------------------	-----------------------------	--

VOR-A
LINDEN/ PRICE'S (9G2)

<div><div>▼</div><div>▲ NA</div></div> <div>Use Flint altimeter setting.</div>	MISSED APPROACH: Climbing right turn to 2600 direct FNT VORTAC and hold.
--	--

FLINT APP CON ★ 118.8 257.9	UNICOM 123.0 (CTAF) 0
---------------------------------------	--



▼

▲

NA

Obtain local altimeter setting on CTAF; when not received, use Muskegon altimeter setting and increase all MDAs 220 feet and all visibilities ¾ of a mile.

MISSED APPROACH: Climbing right turn to 2500 in LDM NDB holding pattern.

AWOS-3

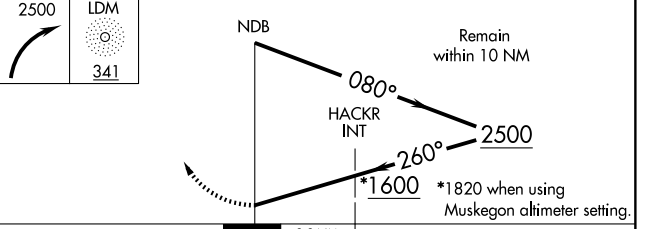
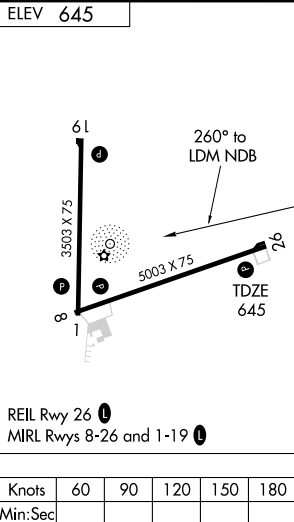
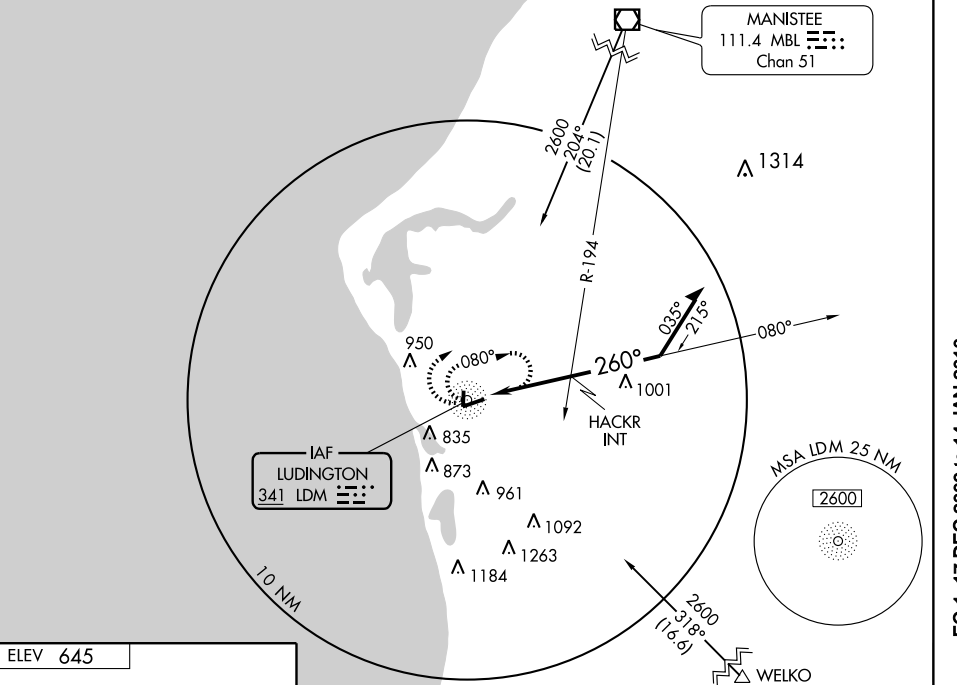
119.925

MINNEAPOLIS CENTER

120.85 322.35

UNICOM

123.0 (CTAF) 0



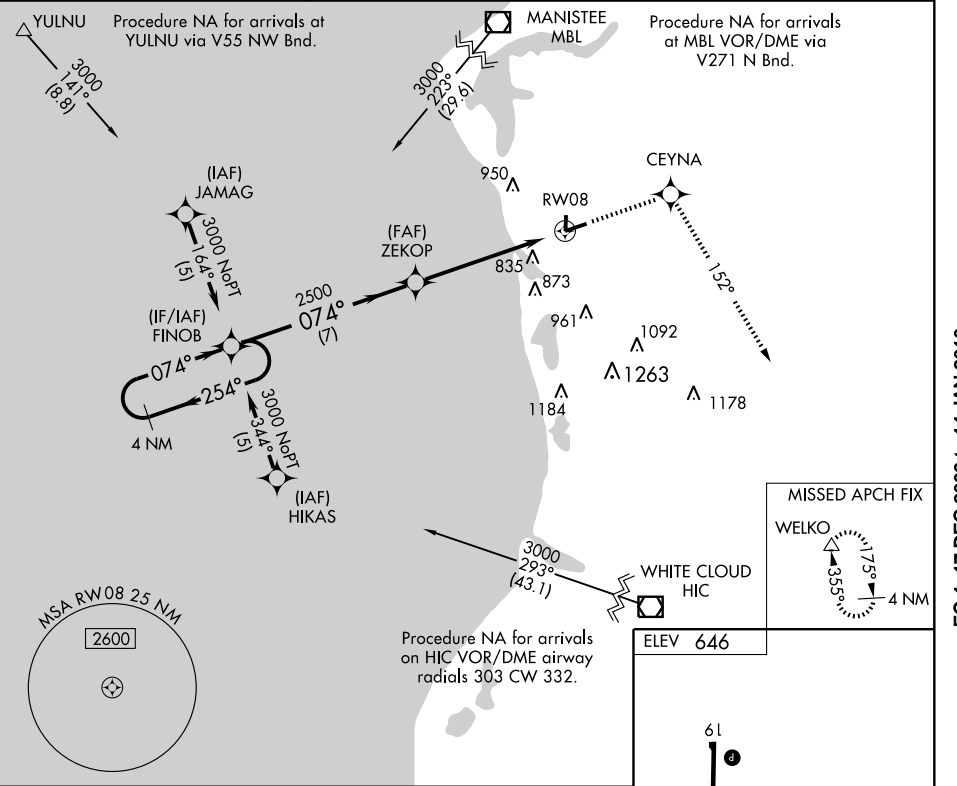
CATEGORY	A		B		C	D
S-26	1600-1¼	955 (1000-1¼)	1600-1½	955 (1000-1½)	1600-3	955 (1000-3)
CIRCLING	1600-1¼	955 (1000-1¼)	1600-1½	955 (1000-1½)	1600-3	955 (1000-3)
HACKR FIX MINIMUMS						
S-26	1160-1	515 (600-1)	1160-1½	515 (600-1½)	1160-1¾	515 (600-1¾)
CIRCLING	1160-1	515 (600-1)	1200-1½	555 (600-1½)	1300-2	655 (700-2)

EC-1.17 DEC 2009 to 14 JAN 2010

DME/DME RNP -0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Muskegon County altimeter setting and increase all MDAs 120 feet, increase LNAV and circling visibility Cat C/D ½ mile.

MISSED APPROACH: Climb to 3000 direct CEYNA and via 152° track to WELKO and hold.

AWOS-3 119.925	MINNEAPOLIS CENTER 120.85 322.35	UNICOM 123.0 (CTAF)
-------------------	-------------------------------------	------------------------



4 NM Holding Pattern

3000

254°

074°

FINOB

7 NM

ZEKOP

2500

074°

3.05°

TCH 30

5.7 NM

RW08

3000

↑

CEYNA

✦

TRK 152°

WELKO

△

CATEGORY	A	B	C	D
LNAV MDA	1140-1	497 (500-1)	1140-1¼ 497 (500-1¼)	1140-1½ 497 (500-1½)
CIRCLING	1160-1	514 (600-1)	1200-1½ 554 (600-1½)	1300-2 654 (700-2)

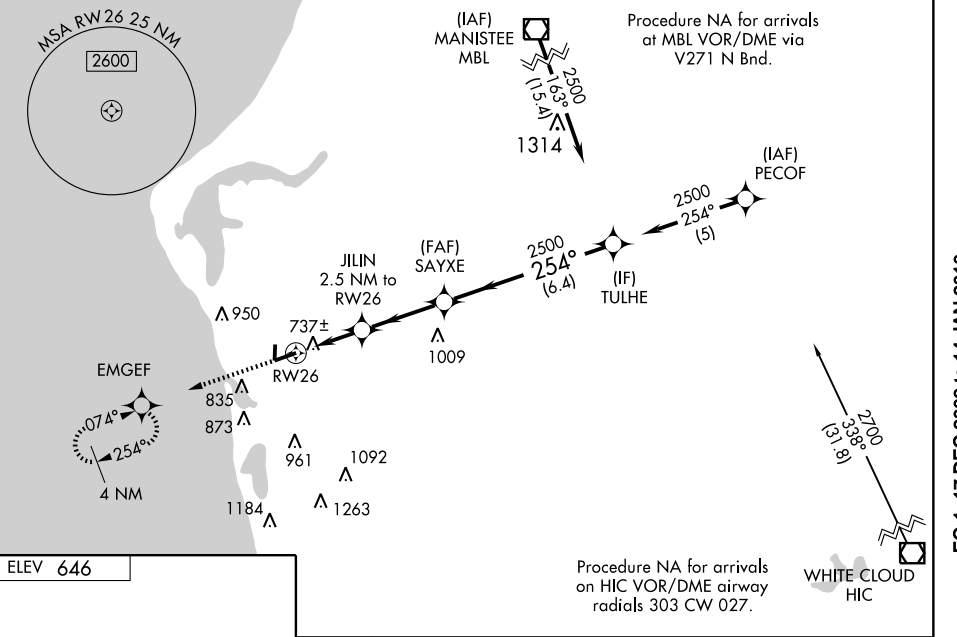
REIL Rwy 26

MIRL Rwy 8-26 and 1-19

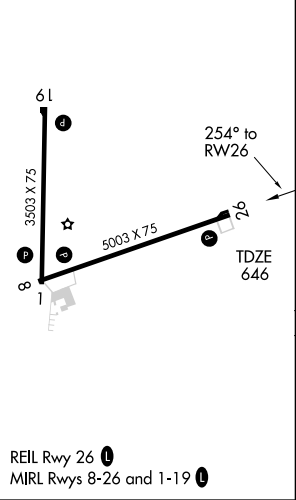
Baro-VNAV NA when using Muskegon altimeter setting. For uncompensated Baro-VNAV systems, procedure NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP -0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Muskegon County altimeter setting and increase DAs and MDAs 120 feet and increase LPV visibility ¼ mile all Cats, increase LNAV/VNAV visibility ½ mile all Cats, increase LNAV Cat C/D visibility ¼ mile, increase circling Cat C/D visibility ½ mile.



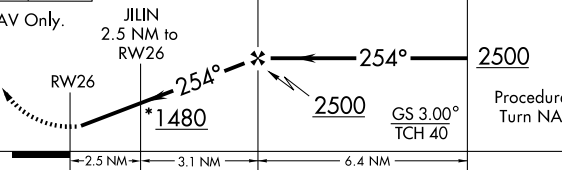
MISSED APPROACH: Climb to 2500 direct EMGEF and hold.

AWOS-3 119.925	MINNEAPOLIS CENTER 120.85 322.35	UNICOM 123.0 (CTAF) 0
--------------------------	--	---------------------------------



ELEV **646**



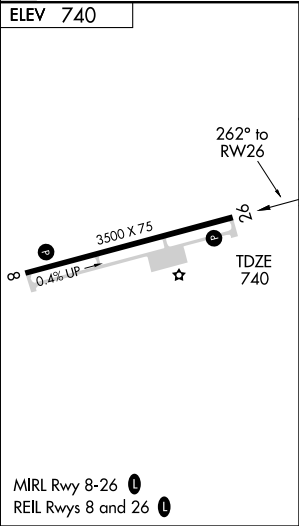
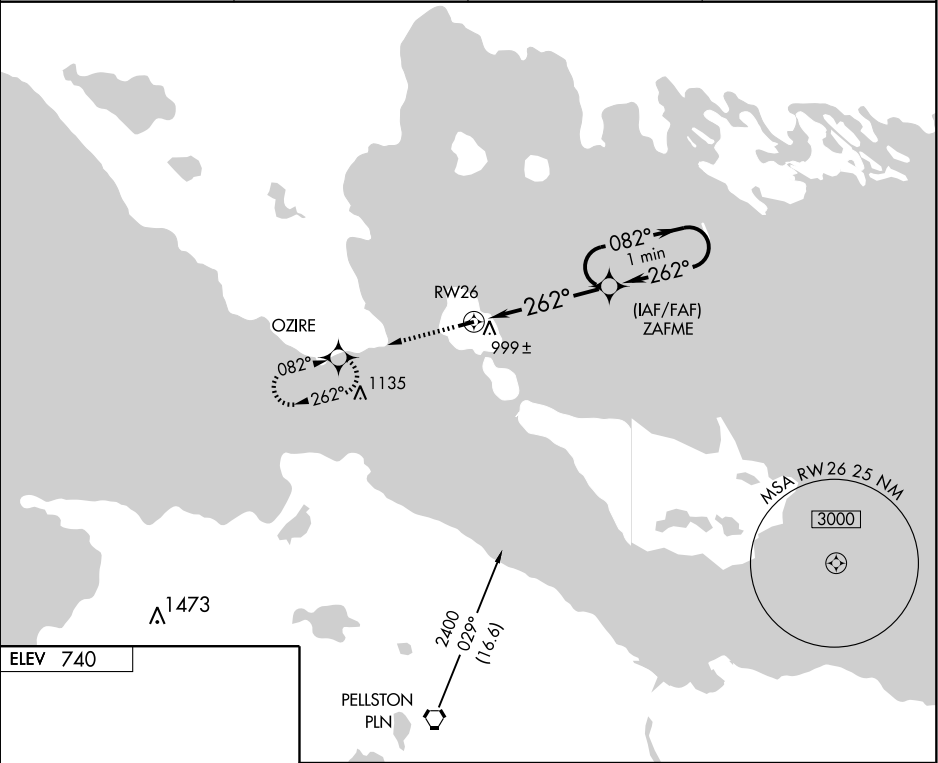
2500	EMGEF				
					
*LNAV Only.					
					
CATEGORY	A	B	C	D	
LPV DA	975-1¼		329 (400-1¼)		
LNAV/ VNAV DA	1020-1¼		374 (400-1¼)		
LNAV MDA	1000-1 354 (400-1)			1000-1¼ 354 (400-1¼)	
CIRCLING	1160-1 514 (600-1)		1200-1½ 554 (600-1½)	1300-2 654 (700-2)	

EC-1.17 DEC 2009 to 14 JAN 2010

GPS RWY 26
MACKINAC ISLAND (MCD)

APP CRS	Rwy Idg	3500
262°	TDZE	740
	Apt Elev	740

<div><div></div><div>NA</div></div>		MISSED APPROACH: Climb to 2400 direct OZIRE WP and hold.	
AWOS-3 118.275	MINNEAPOLIS CENTER 134.6 354.05	UNICOM 122.7 (CTAF)	122.80



2400

OZIRE

One Minute Holding Pattern

ZAFME

082°

2400

262°

RW26

262°

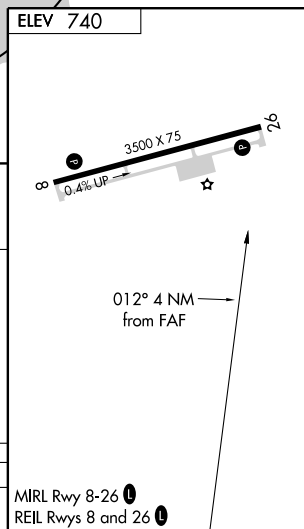
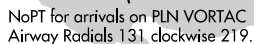
5 NM


CATEGORY	A	B	C	D
S-26	1260-1	520 (600-1)	1260-1½ 520 (600-1½)	NA
CIRCLING	1320-1	580 (600-1)	1320-1½ 580 (600-1½)	NA

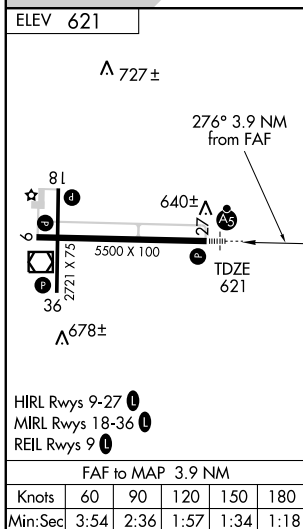
Rwy Idg	N/A
TDZE	N/A
Apt Elev	740

MISSED APPROACH: Climbing right turn to 2400
via PLN R-012 to AMDEE 10 DME and hold.

122.8 L



A	MALSR 		MISSED APPROACH: Climb to 1500 then climbing right turn to 2800 direct MBL VOR/DME and hold.
	AWOS-3 111.4	LANSING RADIO 122.1R	UNICOM 122.8 (CTAF) 0



The diagram illustrates a flight path profile with various constraints:

- Altitude Constraints:**
 - Initial climb from 1500 ft.
 - Turn at 2800 ft.
 - Mandatory Altitude (MBL) 111.4.
 - JEPOT LOM MBL 4.8.
 - HALGI MBL 11.
 - Descent to 2000 ft.
 - Final descent to 2800 ft.
- Distance Constraints:**
 - 3.9 NM segment.
 - 6.2 NM segment.
- Speed Constraints:**
 - GS 3.00° TCH 50.
- Other Labels:**
 - "Remain within 10 NM".
 - "096°" heading indicator.
 - "276°" heading indicator.
 - "2800" altitude marker.
 - "2000" altitude marker.
 - "1935" time or distance marker.

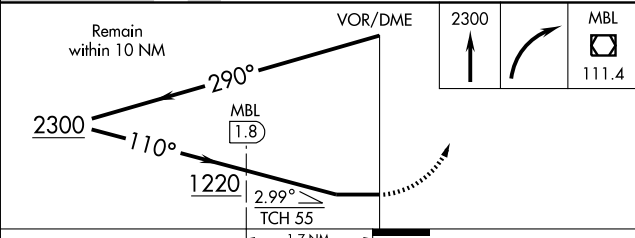
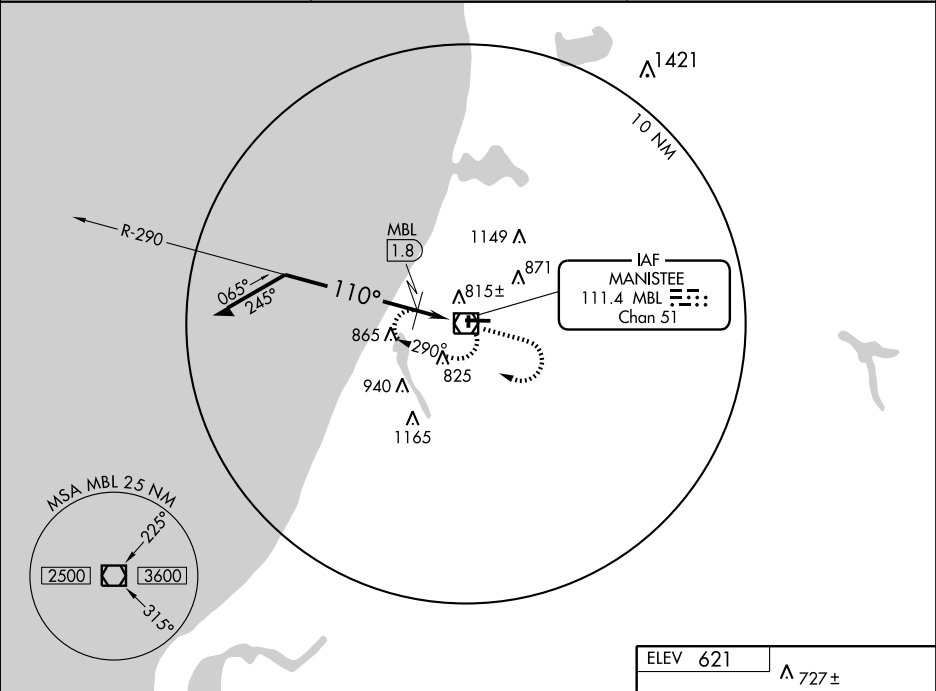
VOR RWY 9

MANISTEE COUNTY-BLACKER (MBL)

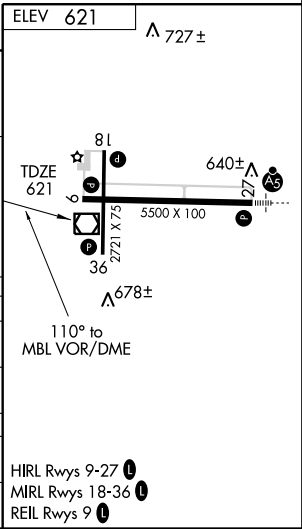
VOR/DME MBL	APP CRS	Rwy Idg	5500
111.4	110°	TDZE	621
Chan 51		Apt Elev	621

MISSED APPROACH: Climb to 2300, then right turn direct MBL VOR/DME and hold.

AWOS-3 111.4	LANSING RADIO 122.1R	UNICOM 122.8 (CTAF) 0
-----------------	-------------------------	--------------------------



CATEGORY	A	B	C	D
S-9	1220-1 599 (600-1)		1220-1½ 599 (600-1½)	1220-1¾ 599 (600-1¾)
CIRCLING	1220-1 599 (600-1)		1220-1½ 599 (600-1½)	1300-2¼ 679 (700-2¼)
DME MINIMUMS				
S-9	1080-1 459 (500-1)		1080-1¼ 459 (500-1¼)	1080-1½ 459 (500-1½)
CIRCLING	1120-1 499 (500-1)	1160-1 539 (600-1)	1180-1½ 559 (600-1½)	1300-2¼ 679 (700-2¼)



VOR/DME MBL 111.4 Chan 51	APP CRS 271°	Rwy Idg 5500 TDZE 621 Apt Elev 621
---	------------------------	---

VOR RWY 27
MANISTEE COUNTY-BLACKER (MBL)

MALSR

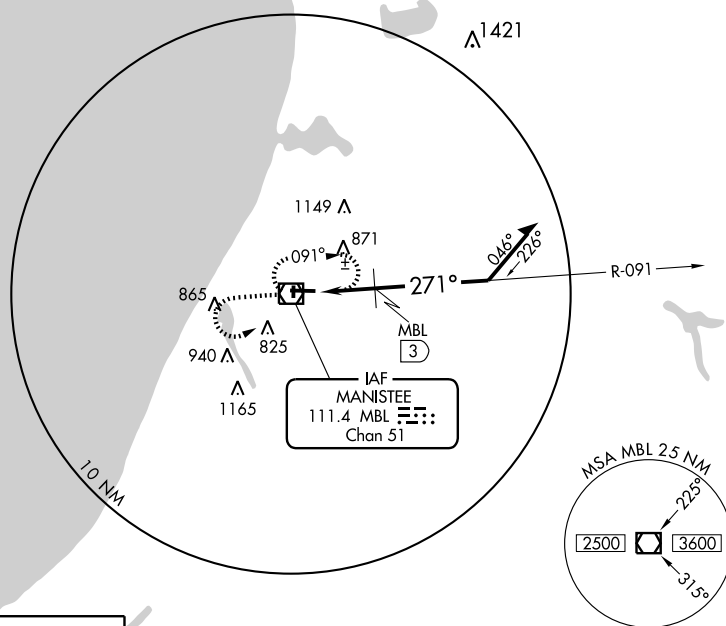


MISSED APPROACH: Climb to 2300, then left turn direct MBL VOR/DME and hold.

AWOS-3
111.4

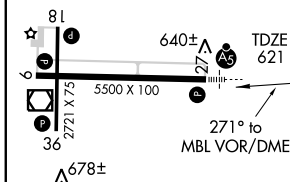
LANSING RADIO
122.1R

UNICOM
122.8 (CTAF) **L**



EC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 621

 $\Delta 727 \pm$ 

2300

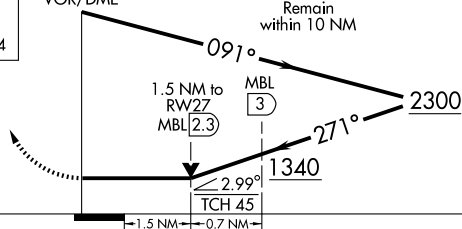


MBL



VOR/DME

Remain
within 10 NM



CATEGORY	A	B	C	D
S-27	1340-1/2 719 (800-1/2)		1340-1 1/2 719 (800-1 1/2)	1340-1 3/4 719 (800-1 3/4)
CIRCLING	1340-1 719 (800-1)		1340-2 719 (800-2)	1340-2 1/4 719 (800-2 1/4)
DME MINIMUMS				
S-27	1140-1/2 519 (600-1/2)		1140-1 519 (600-1)	1140-1 1/4 519 (600-1 1/4)
CIRCLING	1140-1 519 (600-1)	1160-1 539 (600-1)	1180-1 1/2 559 (600-1 1/2)	1300-2 679 (700-2 1/4)

HIRL Rwy 9-27 **L**
MIRL Rwy 18-36 **L**
REIL Rwy 9 **L**

▲ NA

Obtain local altimeter setting on CTAF, when not received, use Escanaba altimeter setting and increase all MDA's 100 feet, and visibility Cats. C and D ¼ mile.

MISSED APPROACH:

Climb to 2300, then right turn direct ISQ VOR/DME and hold.

AWOS-3

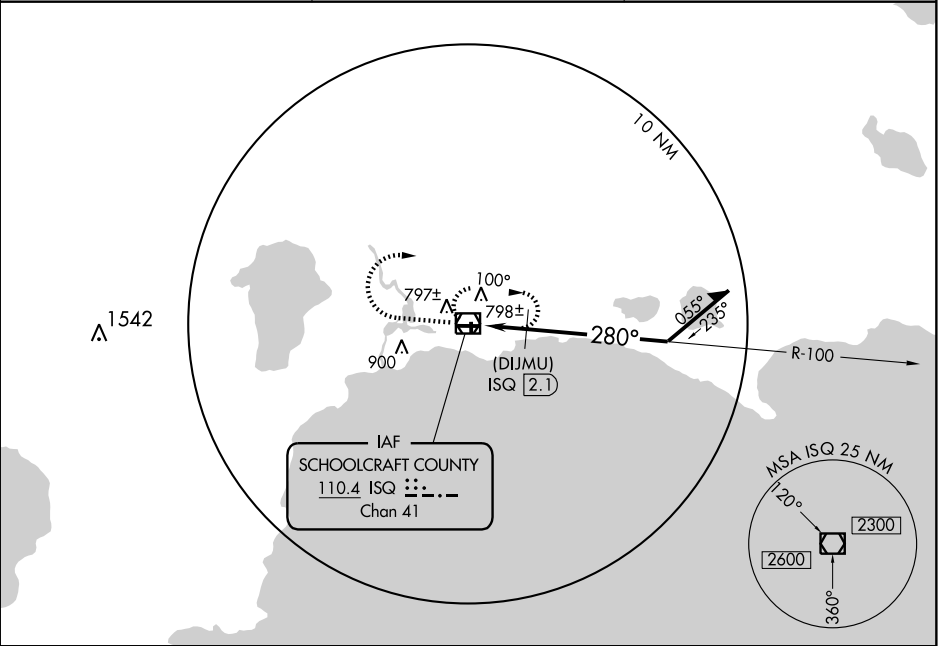
110.4

GREEN BAY RADIO

122.25

UNICOM

122.8 (CTAF) 0

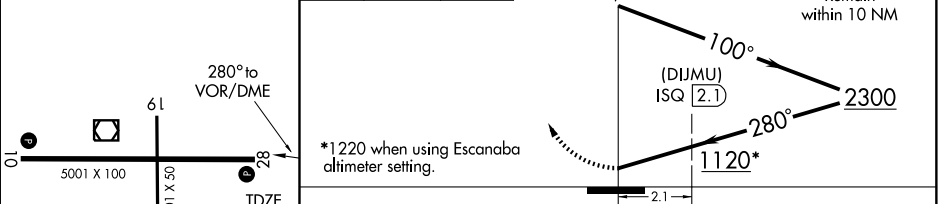


ELEV 685

2300

ISQ

110.4



CATEGORY	A	B	C	D
S-28	1120 - 1	436 (500-1)	1120 - 1¼ 436 (500-1¼)	1120 - 1½ 436 (500-1½)
CIRCLING	1120 - 1 435 (500-1)	1140 - 1 455 (500-1)	1140 - 1½ 455 (500-1½)	1260 - 2 575 (600-2)
DME MINIMUMS				
S-28	1060 - 1 376 (400-1)			1060 - 1¼ 376 (400-1¼)
CIRCLING	1120 - 1 435 (500-1)	1140 - 1 455 (500-1)	1140 - 1½ 455 (500-1½)	1260 - 2 575 (600-2)

REIL Rwy 28 0

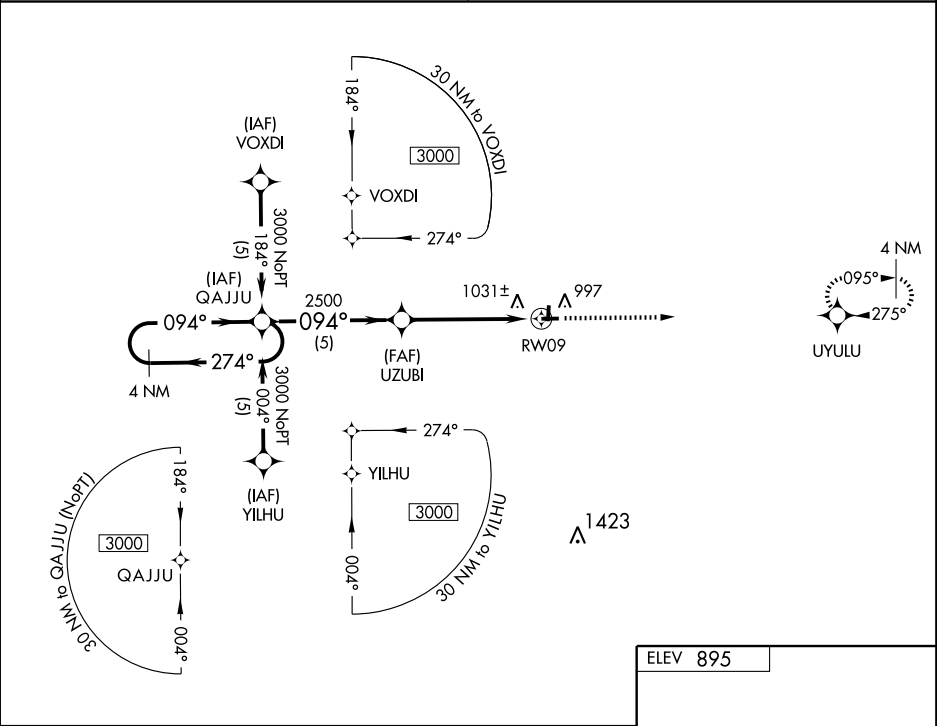
MIRL Rwy 10-28 0

APP CRS	Rwy Idg	3796
094°	TDZE	881
	Apt Elev	895

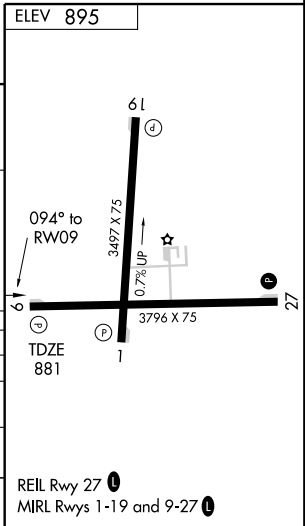
RNAV (GPS) RWY 9

MARLETTE (77G)

<div>▲ NA</div> <div>Use Flint altimeter setting. GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.</div>	<div>MISSED APPROACH: Climb to 2700 direct UYULU WP and hold.</div>
<div>CLEVELAND CENTER</div> <div>127.7 307.8</div>	<div>UNICOM</div> <div>122.8 (CTAF) 0</div>



<div>4 NM Holding Pattern</div> <div>QAJJU</div> <div>3000 ← 274° / 094° →</div> <div>VGSI and descent angles not coincident.</div>				<div>2700</div> <div>UYULU</div>
<div>UZUBI</div> <div>2500</div> <div>3.00° TCH 40</div> <div>5 NM</div> <div>5 NM</div> <div>RW09</div>				
CATEGORY	A	B	C	D
GLS PA DA	NA			
LNAV/VNAV DA	NA			
LNAV MDA	1440-1	559 (600-1)	1440-1½ 559 (600-1½)	1440-1¾ 559 (600-1¾)
CIRCLING	1440-1	545 (600-1)	1440-1½ 545 (600-1½)	1460-2 565 (600-2)

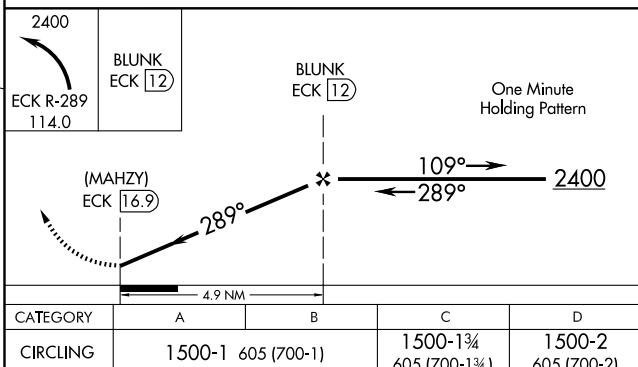
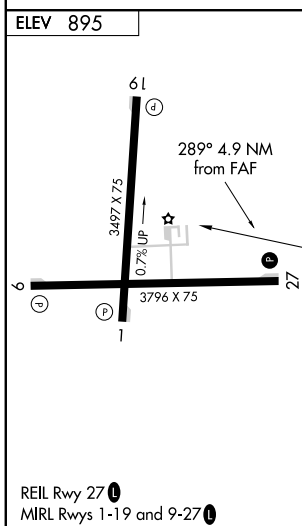
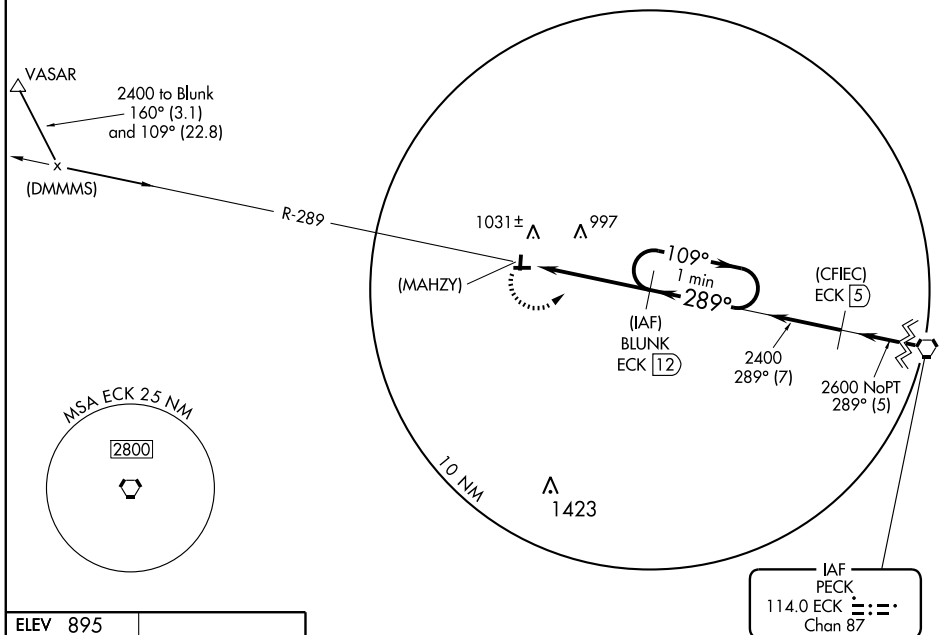


VORTAC ECK 114.0 Chan 87	APP CRS 289°	Rwy Idg TDZE Apt Elev N/A N/A 895
--	------------------------	---

VOR/DME or GPS-A

MARLETTE (77G)

NA Use Flint altimeter setting.	MISSED APPROACH: Climbing left turn to 2400 via ECK R-289 to BLUNK 12 DME and hold.
CLEVELAND CENTER 127.7 307.8	UNICOM 122.8 (CTAF) 0



AIRPORT DIAGRAM

AL-773 (FAA)

MARQUETTE/ SAWYER INTL (SAW)
MARQUETTE, MICHIGAN

AWOS-3

118.375

SAWYER TOWER ★

119.975

GND CON

121.65

D

87°24'W

87°23'W

FIELD
ELEV
1221

61

A

193.4°

0.4% DOWN

12366 X 150

A

B

A

C

D

E

F

A

F

C

D

E

F

A

F

C

D

E

F

A

F

C

D

E

F

CONTROL
TOWER

FIRE STATION

PASSENGER
TERMINAL★
GENERAL
AVIATION
TERMINAL

46°22'N

46°21'N

46°20'N

JANUARY 2005
ANNUAL RATE OF CHANGE
0.1°WRWY 1-19
S75, D175, DT490ELEV
1179

12366 X 150

013.4°

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

EC-1, 17 DEC 2009 to 14 JAN 2010

LOC I-SOU	APP CRS	Rwy Idg	12366
<u>110.1</u>	013°	TDZE	1180
		Apt Elev	1221

ILS RWY 1
MARQUETTE/ SAWYER INTL (SAW)

A For inoperative MALSR increase
S-LOC 1 CAT D visibility to 1.

MALSR

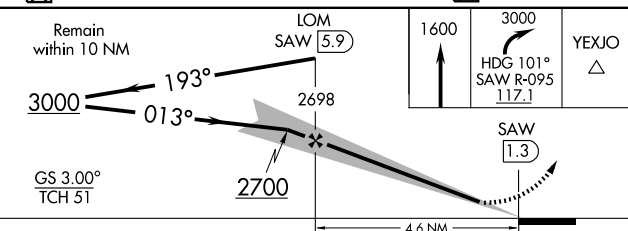
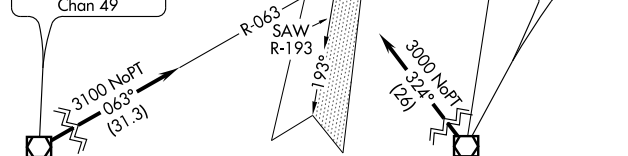
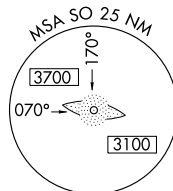
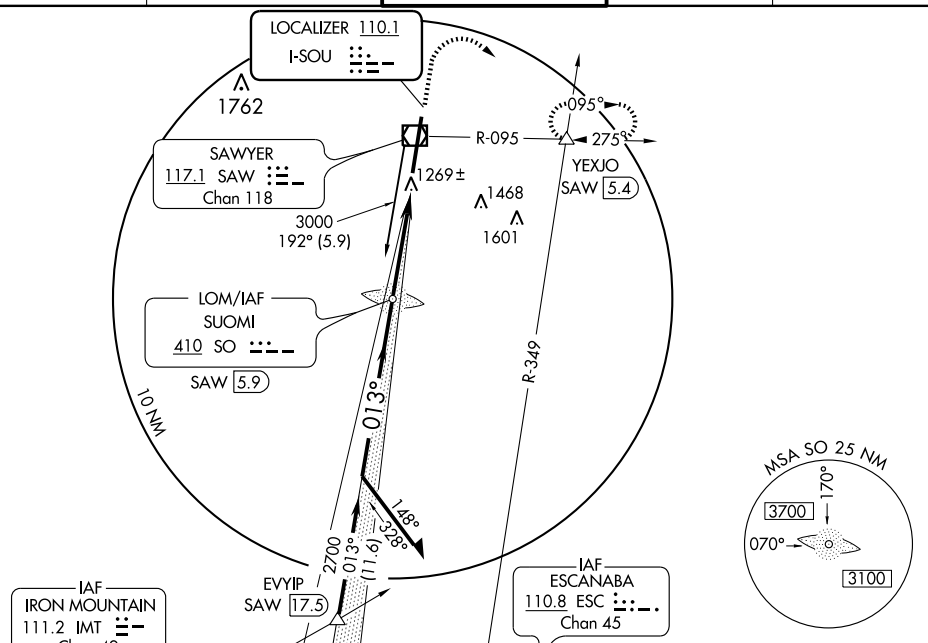
MISSED APPROACH: Climb to 1600, then climbing right turn to 3000 via heading 101° and SAW R-095 to YEXJO Int and hold.

AWOS-3
118.375

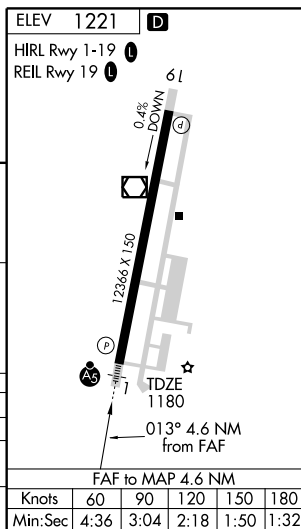
MINNEAPOLIS CENTER
119.1 290.2

SAWYER TOWER ★
119,975 (CTAF) L

GND CON
121.65

UNICOM
122.7

CATEGORY	A	B	C	D
S-ILS 1	1380- $\frac{1}{2}$ 200 (200- $\frac{1}{2}$)			
S-LOC 1	1520- $\frac{1}{2}$ 340 (300- $\frac{1}{2}$)			1520- $\frac{3}{4}$ 340 (300- $\frac{3}{4}$)
CIRCLING	1720-1	499 (500-1)	1720-1 $\frac{1}{2}$ 499 (500-1 $\frac{1}{2}$)	1780-2 559 (600-2)



NDB RWY 1

MARQUETTE/ SAWYER INTL (SAW)

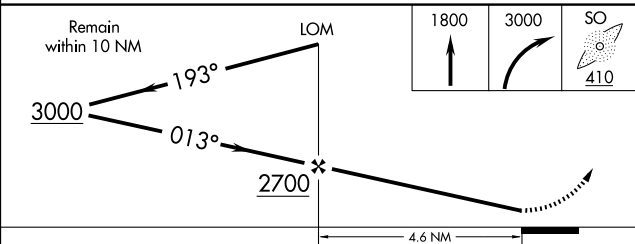
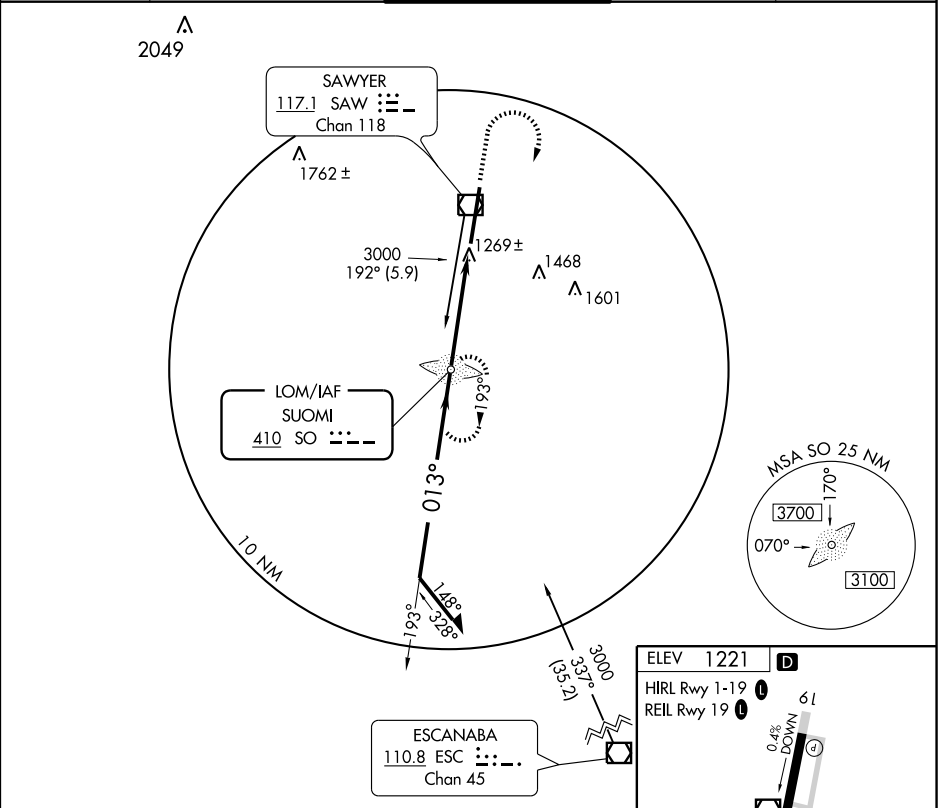
LOM SO	APP CRS	Rwy Idg	12366
410	013°	TDZE	1180
		Apt Elev	1221

NA For inoperative MALS, increase S-1 CAT C visibility to 1.

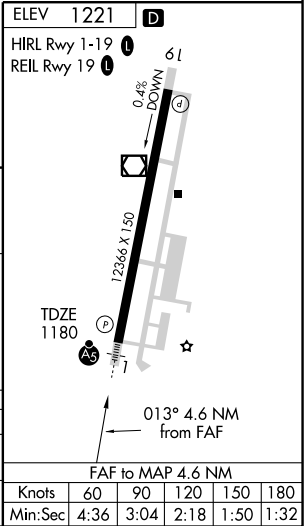


MISSED APPROACH: Climb to 1800, then climbing right turn to 3000 direct SUOMI LOM and hold.

AWOS-3 118.375	MINNEAPOLIS CENTER 119.1 290.2	SAWYER TOWER ★ 119.975 (CTAF) 0	GND CON 121.65	UNICOM 122.7
-------------------	-----------------------------------	------------------------------------	-------------------	-----------------




CATEGORY	A	B	C	D
S-1	1580-¾ 400 (400-¾)			1580-1 400 (400-1)
CIRCLING	1720-1 499 (500-1)	1720-1½ 499 (500-1½)	1780-2 559 (600-2)	

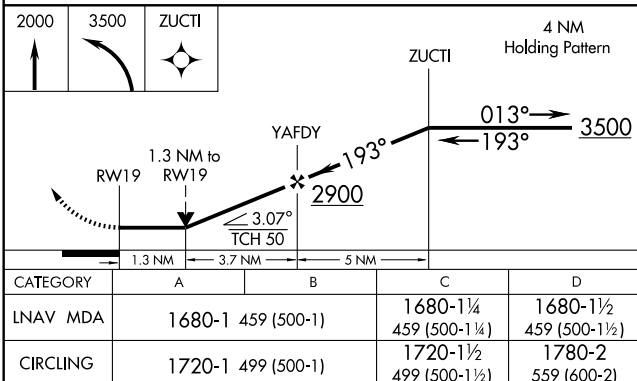
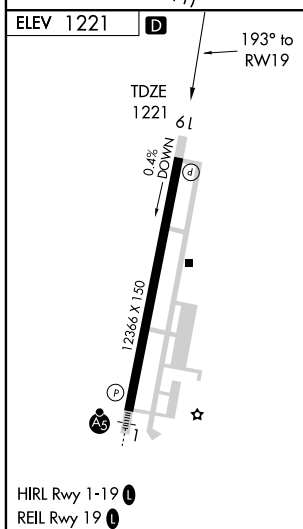
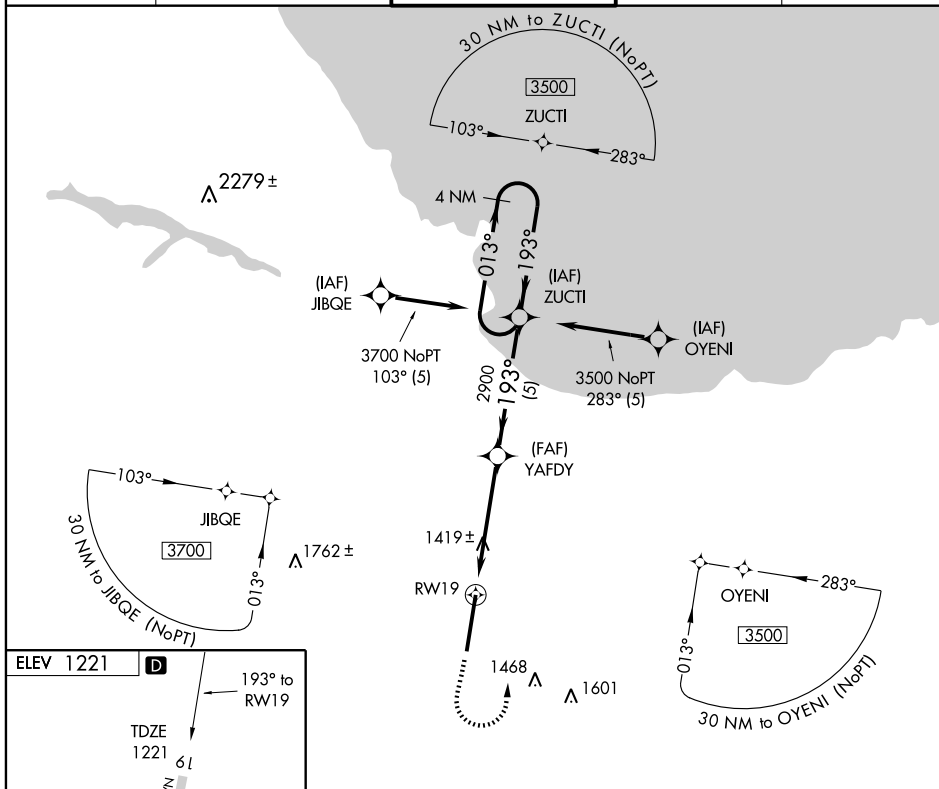


APP CRS 193°	Rwy Idg TDZE Apt Elev	12366 1221 1221
------------------------	-----------------------------	--

RNAV (GPS) RWY 19

MARQUETTE/ SAWYER INTL (SAW)

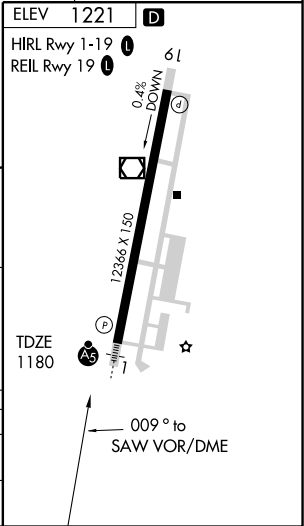
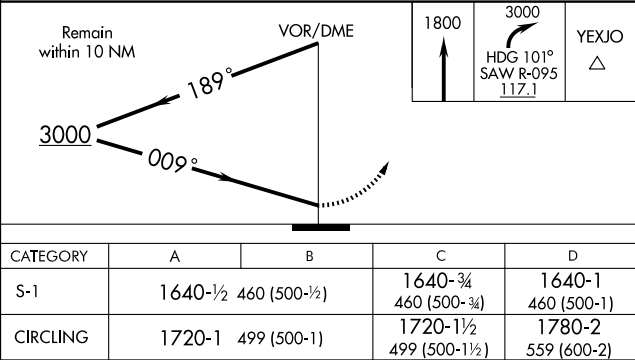
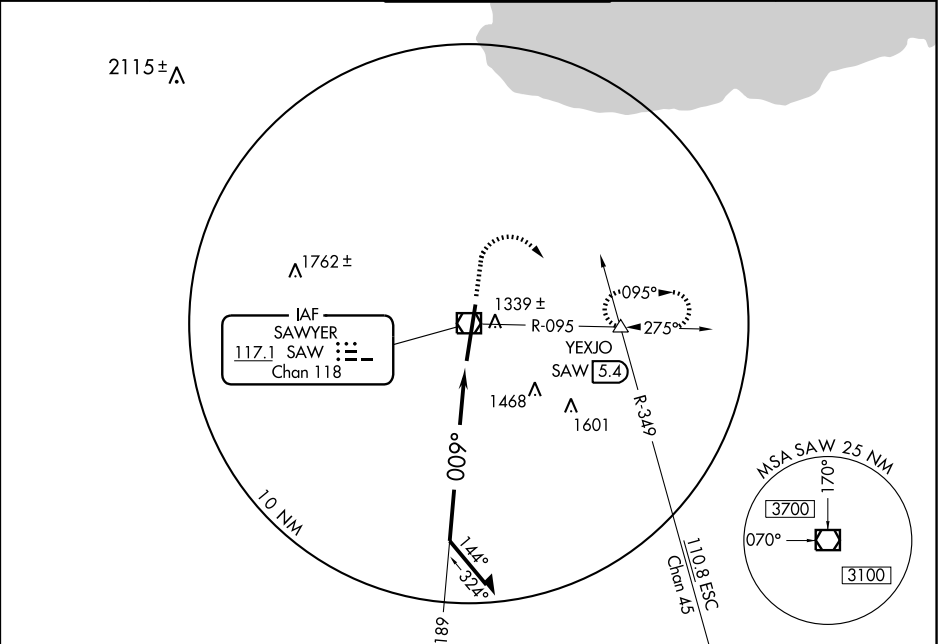
 NA GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.		MISSED APPROACH: Climb to 2000, then climbing left turn to 3500 direct ZUCTI WP and hold.		
AWOS-3 118.375	MINNEAPOLIS CENTER 119.1 290.2	SAWYER TOWER ★ 119.975 (CTAF) 0	GND CON 121.65	UNICOM 122.7



VOR/DME SAW	APP CRS	Rwy Idg	12366
117.1	009°	TDZE	1180
Chan 118		Apt Elev	1221

VOR RWY 1
MARQUETTE/ SAWYER INTL (SAW)

		MALS R	MISSED APPROACH: Climb to 1800, then climbing right turn to 3000 via heading 101° and SAW R-095 to YEXJO Int and hold.
AWOS-3 118.375	MINNEAPOLIS CENTER 119.1 290.2	SAWYER TOWER ★ 119.975 (CTAF) 0	GND CON 121.65
			UNICOM 122.7



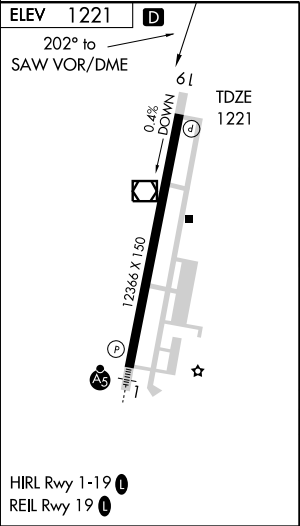
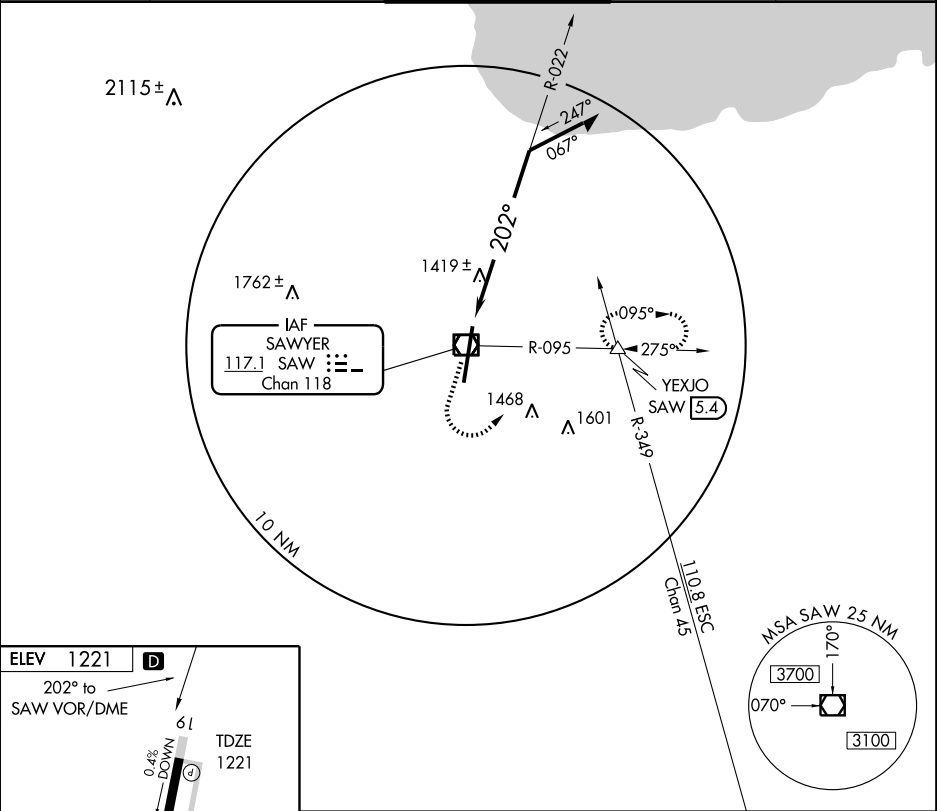
VOR RWY 19

MARQUETTE/SAWYER INTL (SAW)

VOR/DME SAW	APP CRS	Rwy Idg
117.1	202°	12366
Chan 118		TDZE 1221
		Apt Elev 1221

MISSED APPROACH: Climb to 1800, then climbing left turn to 3000 via heading 050° and SAW R-095 to YEXJO Int and hold.

AWOS-3 118.375	MINNEAPOLIS CENTER 119.1 290.2	SAWYER TOWER ★ 119.975 (CTAF) 0	GND CON 121.65	UNICOM 122.7
-------------------	-----------------------------------	------------------------------------	-------------------	-----------------



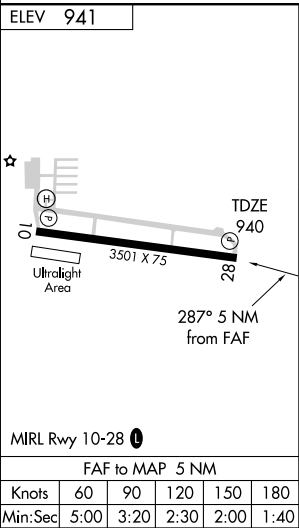
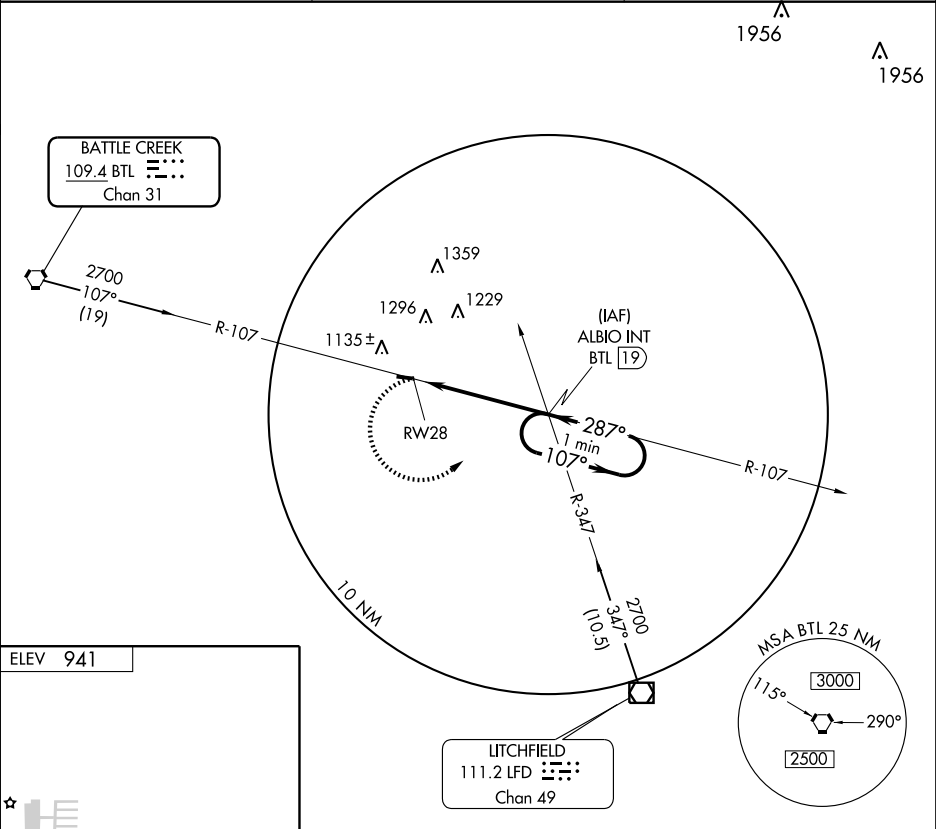
1800	3000	YEXJO	VOR/DME	Remain within 10 NM
↑	HDG 050° SAW R-095 117.1	△	022°	3000
			202°	
CATEGORY	A	B	C	D
S-19	1720-1	499 (500-1)	1720-1¼ 499 (500-1¼)	1720-1½ 499 (500-1½)
CIRCLING	1720-1	499 (500-1)	1720-1½ 499 (500-1½)	1780-2 559 (600-2)




VOR BTL	APP CRS	Rwy Idg	3501
109.4	287°	TDZE	940
Chan 31		Apt Elev	941

VOR or GPS RWY 28
MARSHALL / BROOKS FIELD (RMY)

MISSED APPROACH: Climbing left turn to 2700 via
BTL R-107 to ALBIO Int/BTL 19 DME and hold.

AWOS-3 120.025	KALAMAZOO APP CON 119.2 340.9	UNICOM 122.8 (CTAF) 0
-------------------	----------------------------------	--------------------------



<div>2700</div> <div></div> <div>BTL R-107</div>		<div>ALBIO INT</div> <div>BTL 19</div>	<div>ALBIO</div> <div>BTL 19</div>		<div>Remain within 10 NM</div>	
<div>RW28</div> <div>BTL 14</div> <div></div>		<div></div>		<div><div>107° →</div><div>2700</div><div>← 287°</div><div>2700</div></div>		
		<div>5 NM</div>				
CATEGORY	A	B	C	D		
S-28	1400-1	460 (500-1)	1400-1¼ 460 (500-1¼)	NA		
CIRCLING	1460-1	519 (600-1)	1460-1½ 519 (600-1½)	NA		

APP CRS	Rwy Idg	4000
275°	TDZE	919
	Apt Elev	919

GPS RWY 28

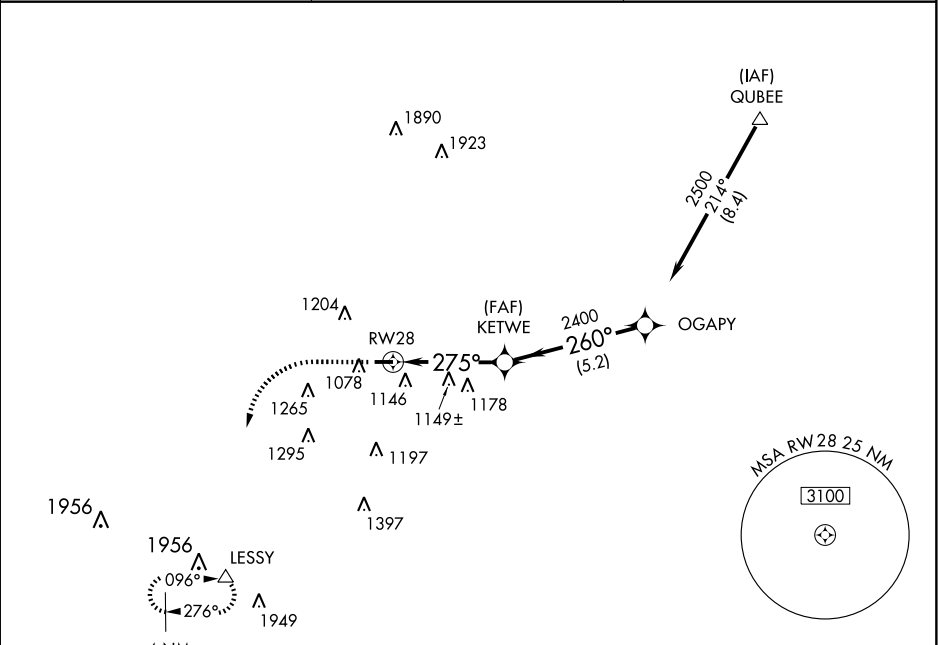
MASON JEWETT FIELD (TEW)

▼

▲ NA

MISSED APPROACH: Climb to 1700 then climbing left turn to 3000 direct LESSY and hold.

AWOS-3 119.425	LANSING APP CON 118.65 226.40	UNICOM 122.7 (CTAF) 0
-------------------	----------------------------------	--------------------------

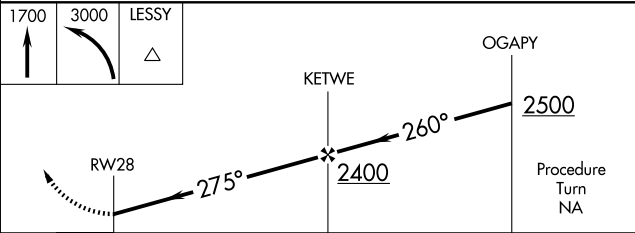


ELEV 919

1700

3000

LESSY



CATEGORY	A	B	C	D
S-28	1400-1	481 (500-1)	NA	NA
CIRCLING	1560-1	641 (700-1)	NA	NA

10

4000 X 75

TDZE 919

28

275° to RW28

MIRL Rwy 10-28 L
REIL Rwy 10 and 28 L

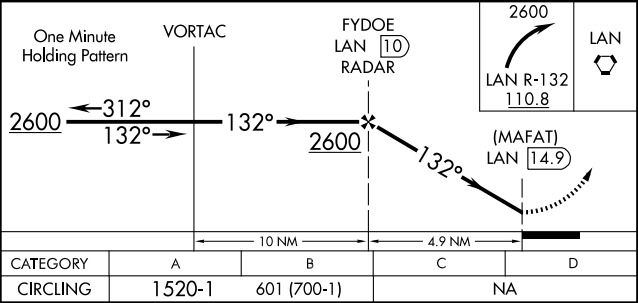
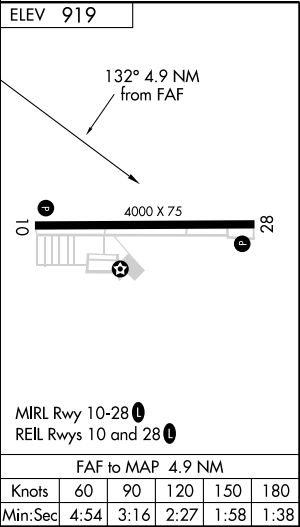
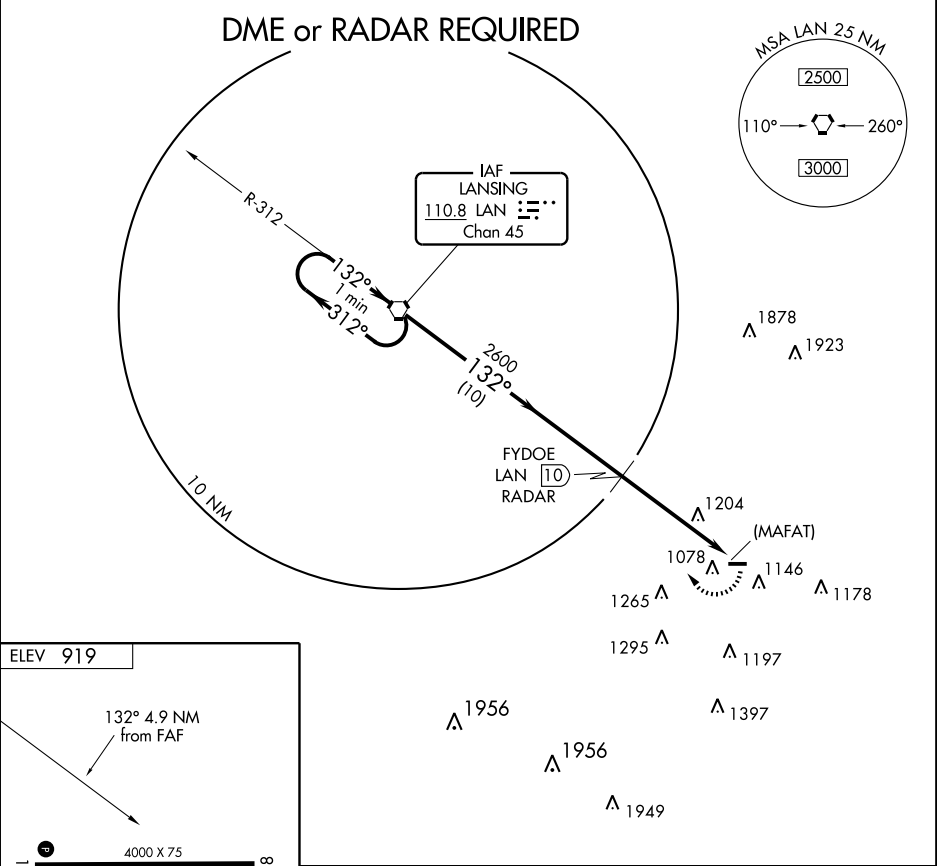
▼

MISSED APPROACH: Climbing right turn to 2600
via LAN R-132 to LAN VORTAC and hold.

AWOS-3
119.425

LANSING APP CON
118.65 226.40

UNICOM
122.7 (CTAF) 0



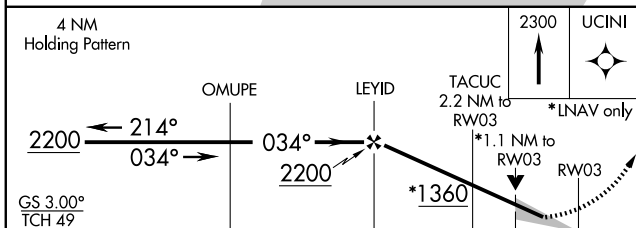
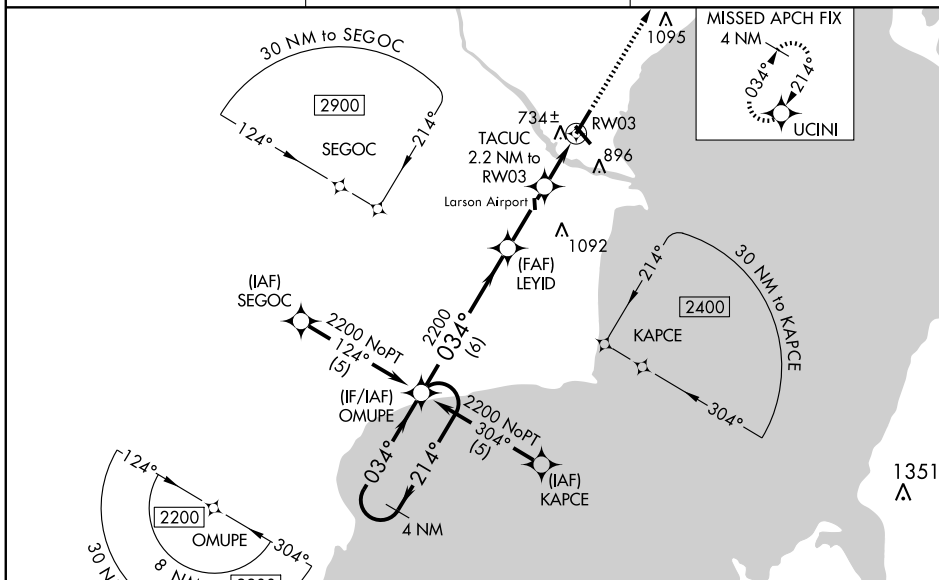
WAAS CH 73014 W03A	APP CRS 034°	Rwy Idg TDZE Apt Elev	6000 624 625
--	------------------------	-----------------------------	---

RNAV (GPS) RWY 3

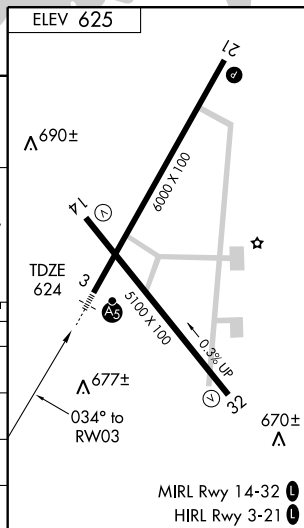
MENOMINEE-MARINETTE TWIN COUNTY (MNM)

<p>V For inoperative MALSRR, increase LNAV Cat D visibility to 1$\frac{1}{4}$. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Sturgeon Bay altimeter setting and increase all DA/MDA 60 feet, increase LNAV Cat C and Circling Cat C visibility $\frac{1}{4}$ mile. Baro-VNAV and VDP NA when using Sturgeon Bay altimeter setting. For inoperative MALSRR when using Sturgeon Bay altimeter setting, increase LPV all Cats visibility to 1 mile.</p>	<p>MALSRR</p> <p>A5</p> <p>MISSED APPROACH: Climb to 2300 direct UCINI and hold.</p>
---	---

AWOS-3 109.6	GREEN BAY APP CON ★ 119.5 338.2	UNICOM 122.8 (CTAF) 0
------------------------	---	---------------------------------



CATEGORY	A	B	C	D
LPV DA	824-1 $\frac{1}{2}$	200 (200-1 $\frac{1}{2}$)		
LNAV/VNAV DA	1150-1 $\frac{1}{2}$	526 (600-1 $\frac{1}{2}$)		
LNAV MDA	1000-1 $\frac{1}{2}$	376 (400-1 $\frac{1}{2}$)		1000-1 376 (400-1)
CIRCLING	1200-1	575 (600-1)	1200-1 $\frac{1}{2}$ 575 (600-1 $\frac{1}{2}$)	1200-2 575 (600-2)



APP CRS 323°	Rwy Idg TDZE Apt Elev	5100 608 625
MENOMINEE-MARINETTE TWIN COUNTY (MNM)		

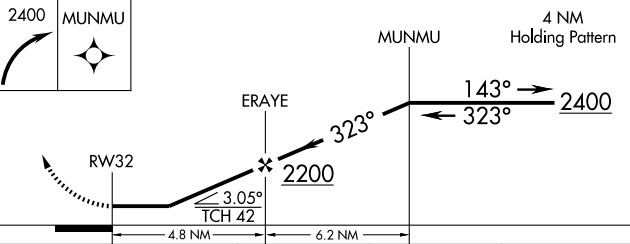
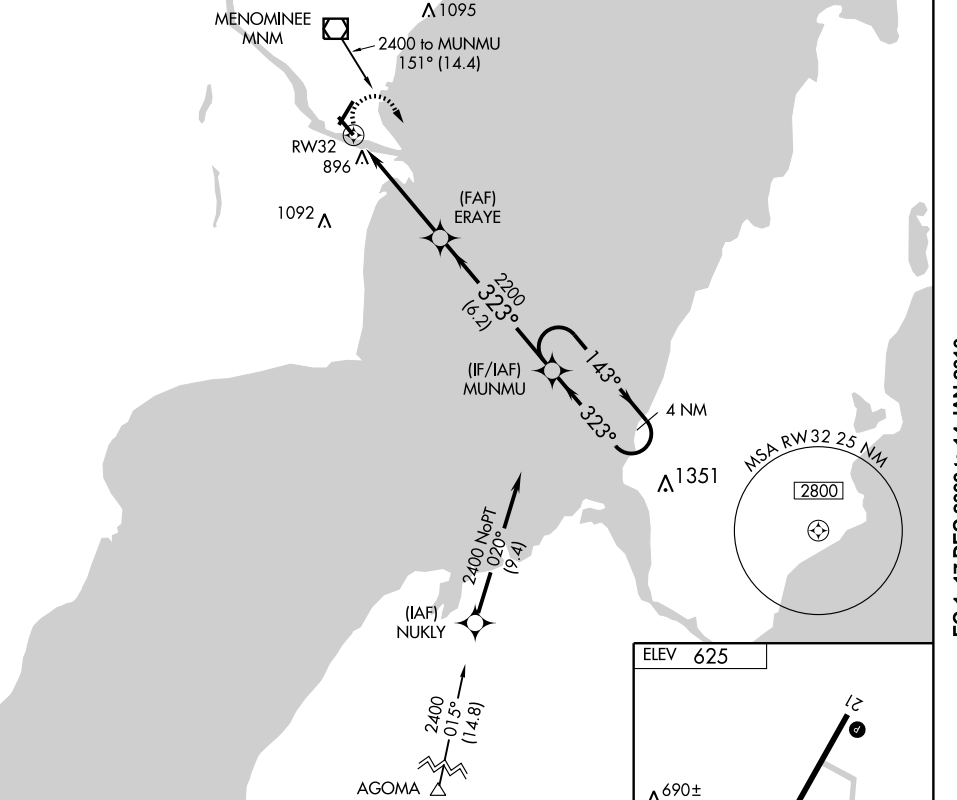
T

A

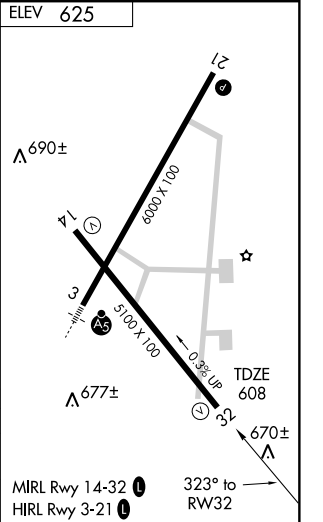
DME/DME RNP-0.3 NA. When local altimeter setting not received, use Sturgeon Bay altimeter setting and increase all MDA 60 feet, increase LNAV Cat C/D and Circling Cat C visibility ¼ mile.

MISSED APPROACH: Climbing right turn to 2400 direct MUNMU WP and hold.

AWOS-3 109.6	GREEN BAY APP CON ★ 119.5 338.2	UNICOM 122.8 (CTAF) 0
-----------------	------------------------------------	--------------------------



CATEGORY	A	B	C	D
LNAV MDA	1160-1 552 (600-1)	1160-1½ 552 (600-1½)	1160-1¾ 552 (600-1¾)	1160-2 552 (600-2)
CIRCLING	1200-1 575 (600-1)	1200-1½ 575 (600-1½)	1200-2 575 (600-2)	1200-2 575 (600-2)



EC-1, 17 DEC 2009 to 14 JAN 2010

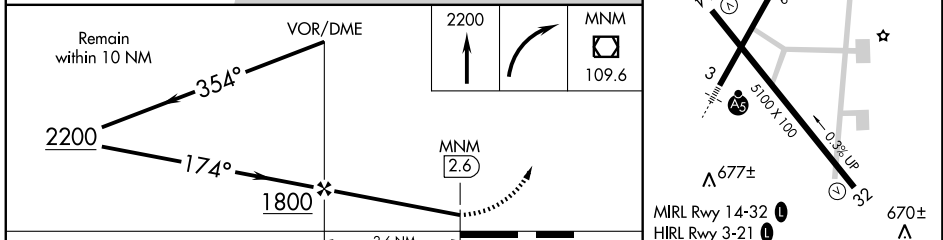
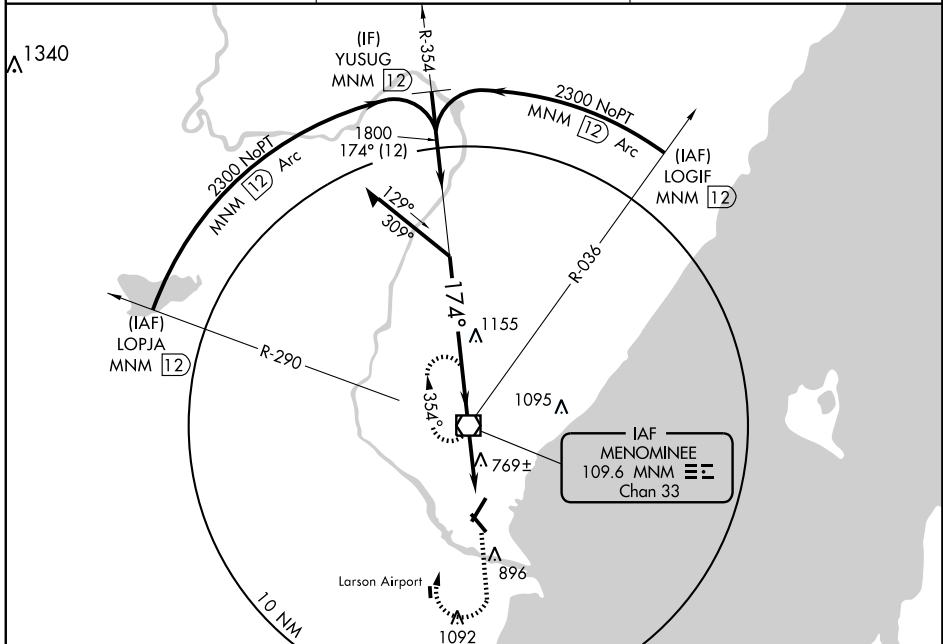
VOR/DME MNM 109.6 Chan 33	APP CRS 174°	Rwy Idg TDZE Apt Elev N/A N/A 625
---	------------------------	---

MENOMINEE-MARINETTE TWIN COUNTY (MNM)

⚠ When local altimeter setting not received, use Sturgeon Bay altimeter setting and increase MDA 60 feet, increase Circling Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 2200 then right turn direct MNM VOR/DME and hold.

AWOS-3 109.6	GREEN BAY APP CON★ 119.5 338.2	UNICOM 122.8 (CTAF) 0
------------------------	--	---------------------------------



CATEGORY	A	B	C	D	FAF to MAP 2.6 NM					
CIRCLING	1200-1	575 (600-1)	1200-1½ 575 (600-1½)	1200-2 575 (600-2)	Knots	60	90	120	150	180
					Min:Sec	2:36	1:44	1:18	1:02	0:52

APP CRS	Rwy Idg	3801
066°	TDZE	628
	Apt Elev	635

RNAV (GPS) RWY 6

MIDLAND / JACK BARSTOW (IKW)

MIDLAND / JACK BARSTOW (IKW)

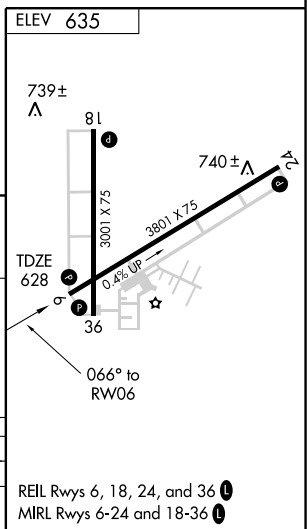
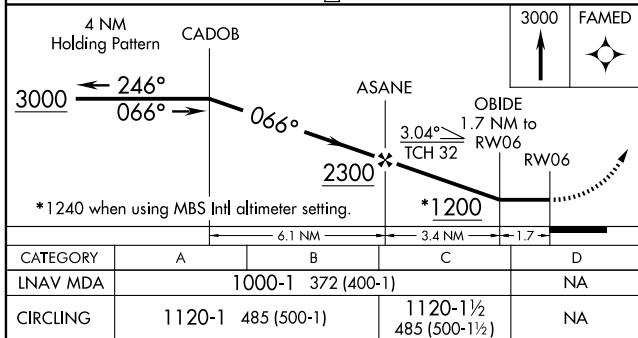
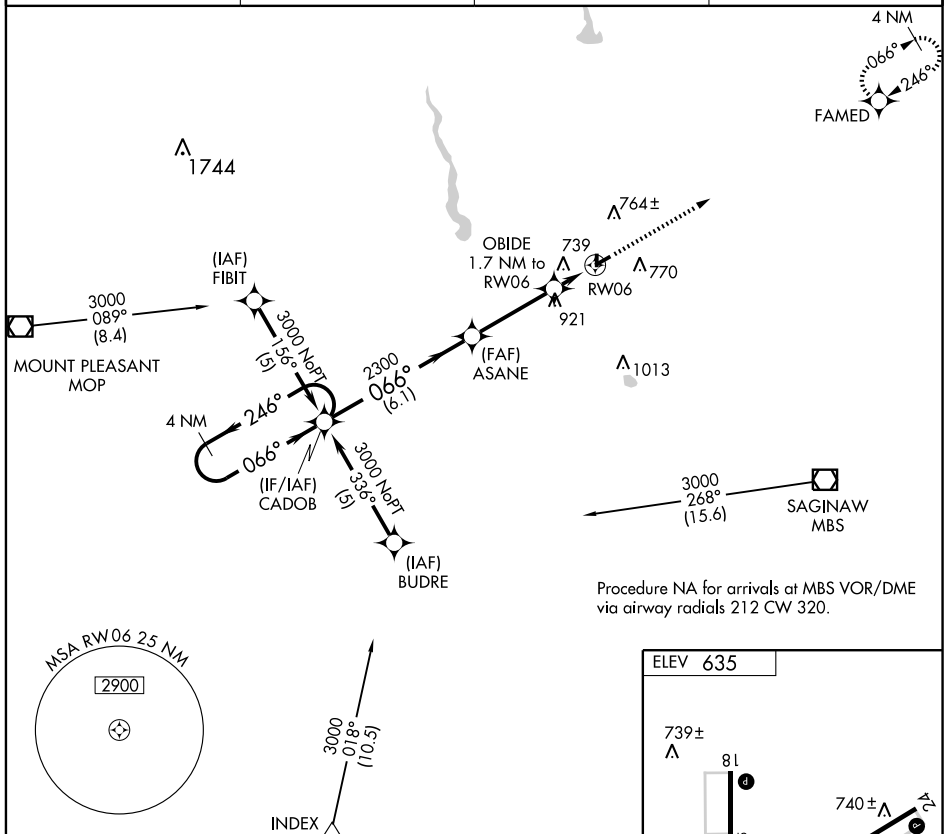
T DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.
A When local altimeter setting not received, use MBS Intl altimeter setting and increase all MDA 40 feet and LNAV Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 3000 direct FAMED and hold.

AWOS-3
119.525

SAGINAW APP CON ★
126.45 235.625

GCO
121,725

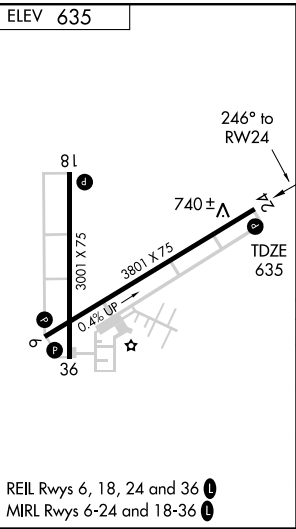
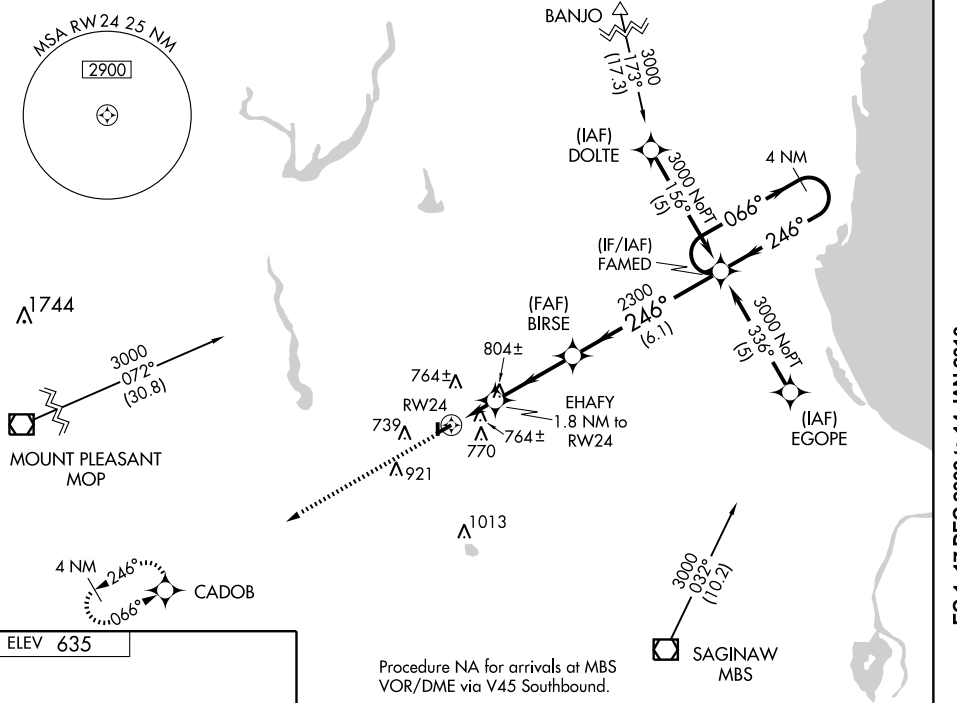
UNICOM
122.8 (CTAF)

Baro-VNAV NA when using MBS Intl altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA.

Visibility reduction by helicopters NA. When local altimeter setting not received, use MBS Intl altimeter setting and increase all DA 31 feet and all MDA 40 feet and all LPV visibility ¼ mile.

MISSED APPROACH:
Climb to 3000 direct
CADOB and hold.

AWOS-3 119.525	SAGINAW APP CON ★ 126.45 235.625	GCO 121.725	UNICOM 122.8 (CTAF)
--------------------------	--	-----------------------	-------------------------------



Procedure NA for arrivals at MBS VOR/DME via V45 Southbound.				
3000	CADOB	VGSI and RNAV glidepath not coincident.	FAMED	4 NM Holding Pattern
<div><div><div>81</div><div>3001 X 75</div><div>3801 X 75</div><div>740 ±</div><div>TDZE 635</div><div>0.4% Up</div><div>36</div></div><div>246° to RW24</div><div>RW24</div><div>EHA FY 1.8 NM to RW24</div><div>*1260</div><div>2300</div><div>246°</div><div>066°</div><div>3000</div><div>GS 3.00° TCH 53</div></div>				
CATEGORY	A	B	C	D
LPV DA	1021-1¼	386 (400-1¼)		NA
LNAV/VNAV DA	1068-1½	433 (500-1½)		NA
LNAV MDA	1060-1	425 (500-1)	1060-1¼ 425 (500-1¼)	NA
CIRCLING	1120-1	485 (500-1)	1120-1½ 485 (500-1½)	NA

REIL Rwy 6, 18, 24 and 36
MIRL Rwy 6-24 and 18-36

EC-1.17 DEC 2009 to 14 JAN 2010

VOR/DME MBS 112.9 Chan 76	APP CRS 137°	Rwy Idg TDZE Apt Elev	N/A N/A 635
---	------------------------	-----------------------------	--

VOR-A

MIDLAND/ JACK BARSTOW (IKW)

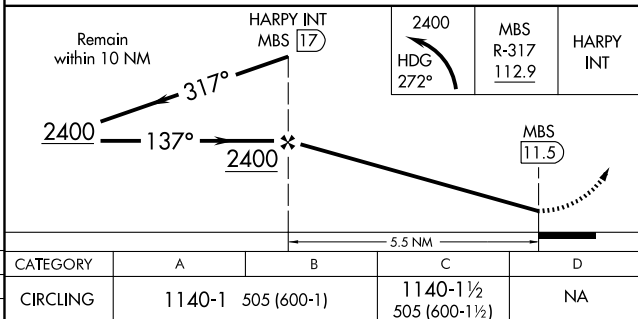
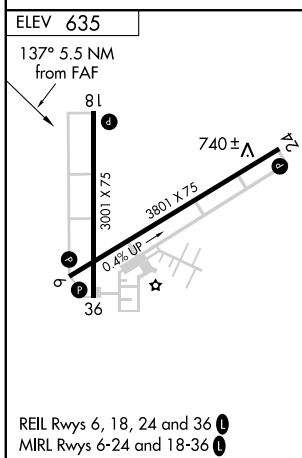
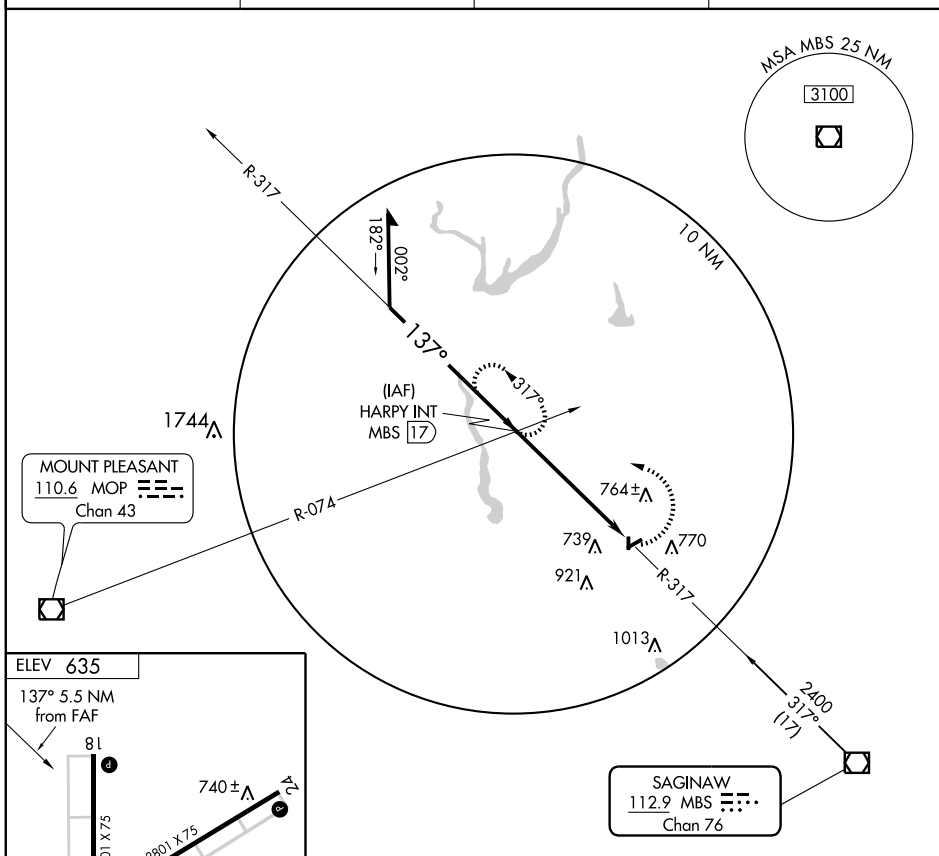
T When local altimeter setting not received, use MBS Intl
A altimeter setting and increase all MDA 40 feet.

MISSED APPROACH: Climbing left turn to 2400 via heading 272° and MBS VOR/DME R-317 to HARPY INT/17 DME and hold

AWOS-3
119.525

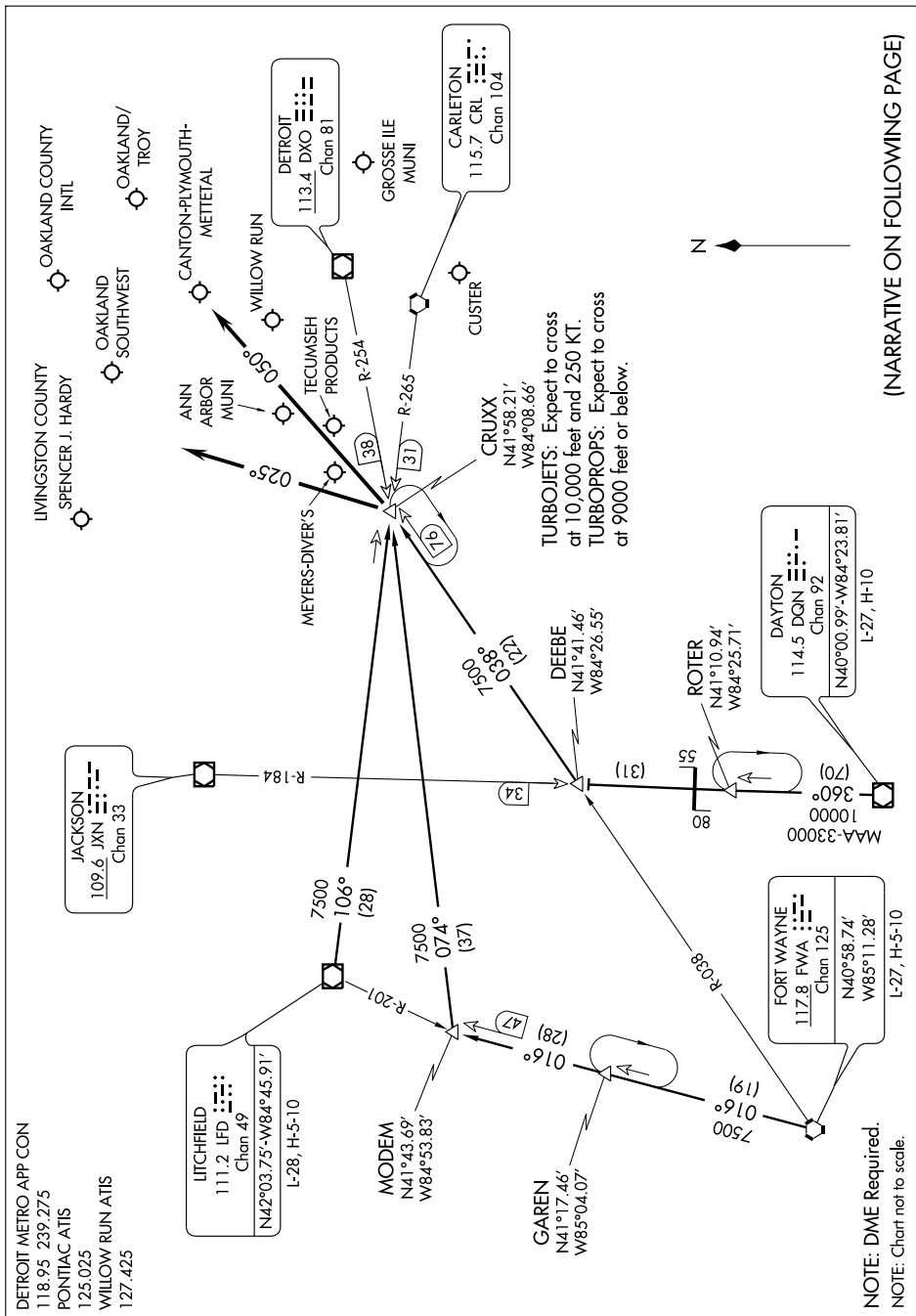
SAGINAW APP CON ★
126.45 235.625

GCO
121.725

UNICOM
122.8 (CTAF)

CRUXX FOUR ARRIVAL

DETROIT, MICHIGAN



ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUX INT. Thence

FORT WAYNE TRANSITION (FWA.CRUX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUX INT. Thence

LITCHFIELD TRANSITION (LFD.CRUX4): From over LFD VORTAC via LFD R-106 to CRUX INT. Thence

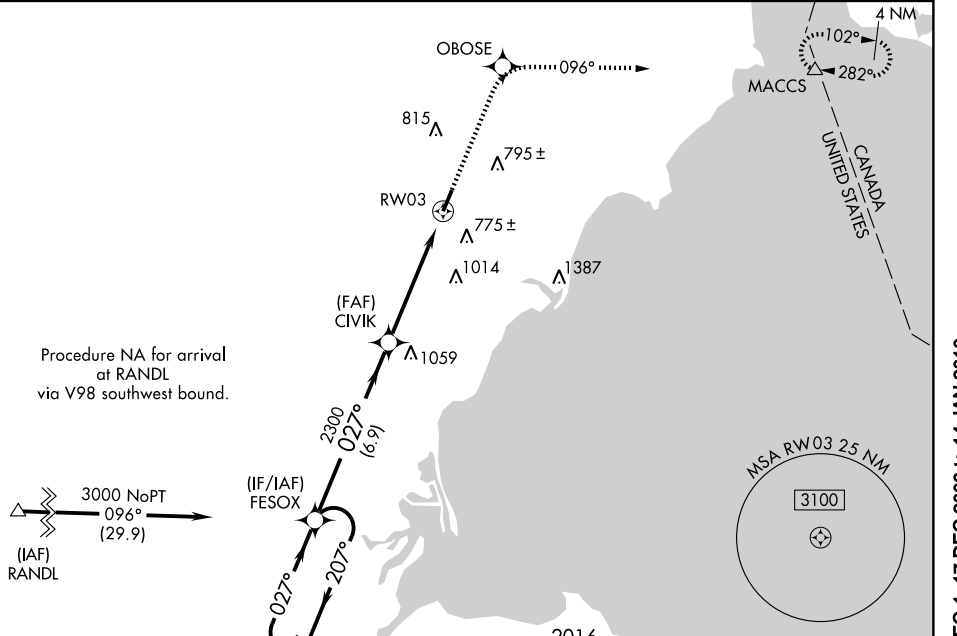
. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUX INT via 025° heading.

. . . . Aircraft landing YIP or ARB: From over CRUX INT via 050° heading.
Expect radar vector to final approach course.

⚠ When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase all MDA 60 feet, LNAV Cat C/D visibility ¼ mile, and Circling Cat C visibility ¼ mile. Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3000 direct OBOSE and via 096° track to MACCS and hold.

AWOS-3 119.075	DETROIT APP CON 134.3 363.2	GCO 121.725	UNICOM 122.7 (CTAF) 0
-------------------	--------------------------------	----------------	---------------------------------



4 NM Holding Pattern	VGSI and descent angles not coincident.	3000	OBOSE	096° TRK	MACCS
	FESOX				
3000	207°	027°	027°	CIVIK	RW03
				2300	
				3.04°	TCH 40
				6.9 NM	5.1 NM

CATEGORY	A	B	C	D
LNAV MDA	1100-1	486 (500-1)	1100-1½ 486 (500-1½)	1100-1½ 486 (500-1½)
CIRCLING	1120-1 504 (600-1)	1180-1 564 (600-1)	1180-1½ 564 (600-1½)	1180-2 564 (600-2)

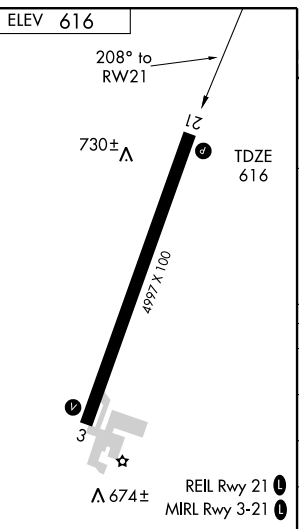
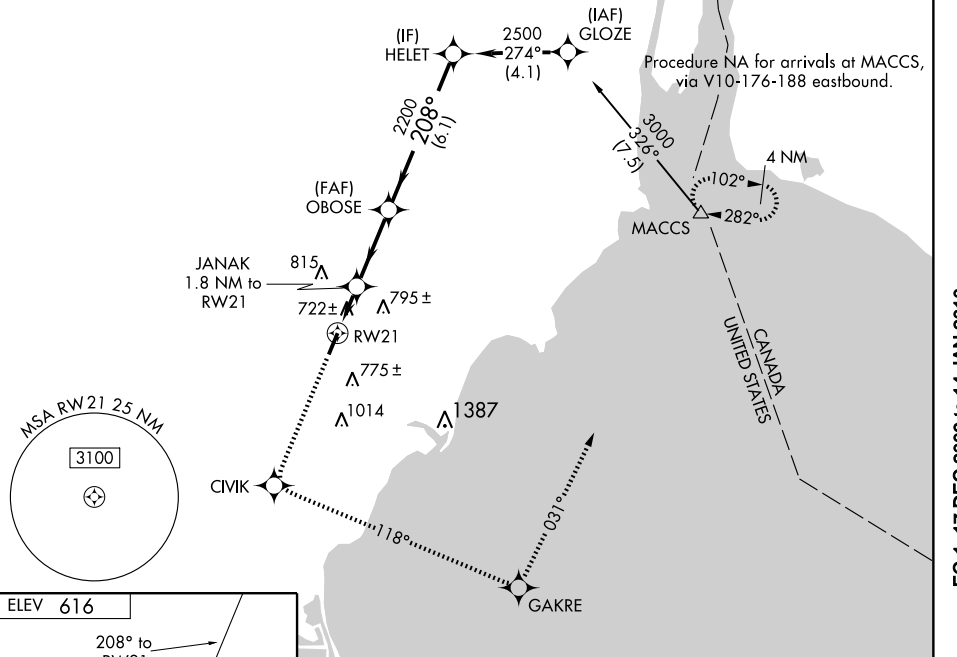
ELEV 616	REIL Rwy 21 0	MIRL Rwy 3-21 0
TDZE 614	3	
	027° to RW03	
	Λ 674±	
	4997 X 100	
	21	

EC-1.17 DEC 2009 to 14 JAN 2010

When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase LPV DA 43 feet and all visibilities ¼ mile, LNAV/VNAV DA 138 feet and all visibilities ½ mile and all MDA 60 feet and Cat C visibilities ¼ mile. Baro-VNAV and VDP NA when using Detroit Metropolitan Wayne County altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.

MISSED APPROACH:
Climb to 3000 direct CIVIK and via 118° track to GAKRE and via 031° track to MACCS and hold.

AWOS-3 119.075	DETROIT APP CON 134.3 363.2	GCO 121.725	UNICOM 122.7 (CTAF) 0
-------------------	--------------------------------	----------------	--------------------------



3000	CIVIK	118° TRK	GAKRE	031° TRK	MACCS	VGSI and RNAV glidepath not coincident.	HELET
↑	✦		✦		△		
* LNAV only.		JANAK 1.8 NM to RW21		OBOSE		2500	Procedure Turn NA GS 3.00° TCH 42
RW21		*0.9 NM to RW21		*1220		2200	
0.9 NM		0.9 NM		3 NM		6.1 NM	
→							
CATEGORY	A		B		C		D
LPV DA	966-1¼ 350 (400-1¼)						
LNAV/VNAV DA	1009-1½ 393 (400-1½)						
LNAV MDA	980-1 364 (400-1)						980-1¼ 364 (400-1¼)
CIRCLING	1120-1 504 (600-1)		1180-1 564 (600-1)		1180-1½ 564 (600-1½)		1180-2 564 (600-1)

EC-1.17 DEC 2009 to 14 JAN 2010

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON

127.5 239.275

WILLOW RUN ATIS 127.425

PONTIAC ATIS 125.025

COLEMAN A. YOUNG ATIS 124.875

WINDSOR ATIS 134.5

SELFREDGE ATIS 125.325 270.1

SPRTN

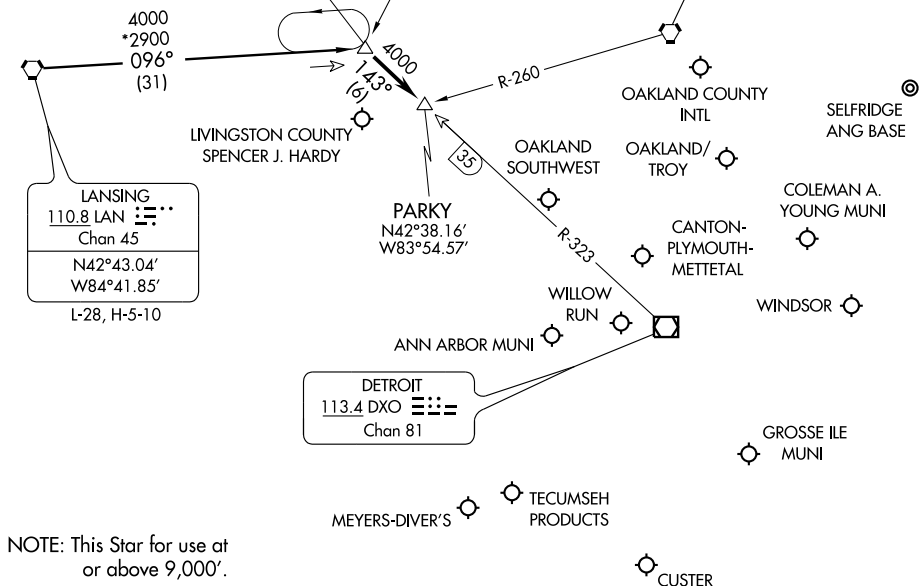
N42°42.52'-W84°00.23'

VERTICAL NAVIGATION

PLANNING INFORMATION

TURBOJETS/TURBOPROPS:

Expect clearance to cross at 9000'.



LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence

. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ,

1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence

. . . . Expect radar vectors to final approach course.

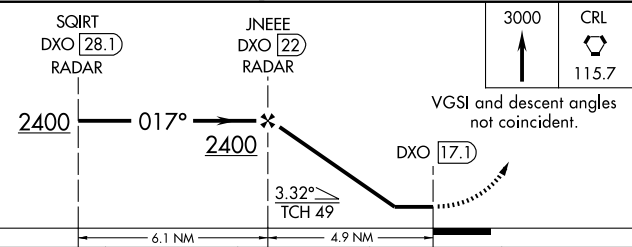
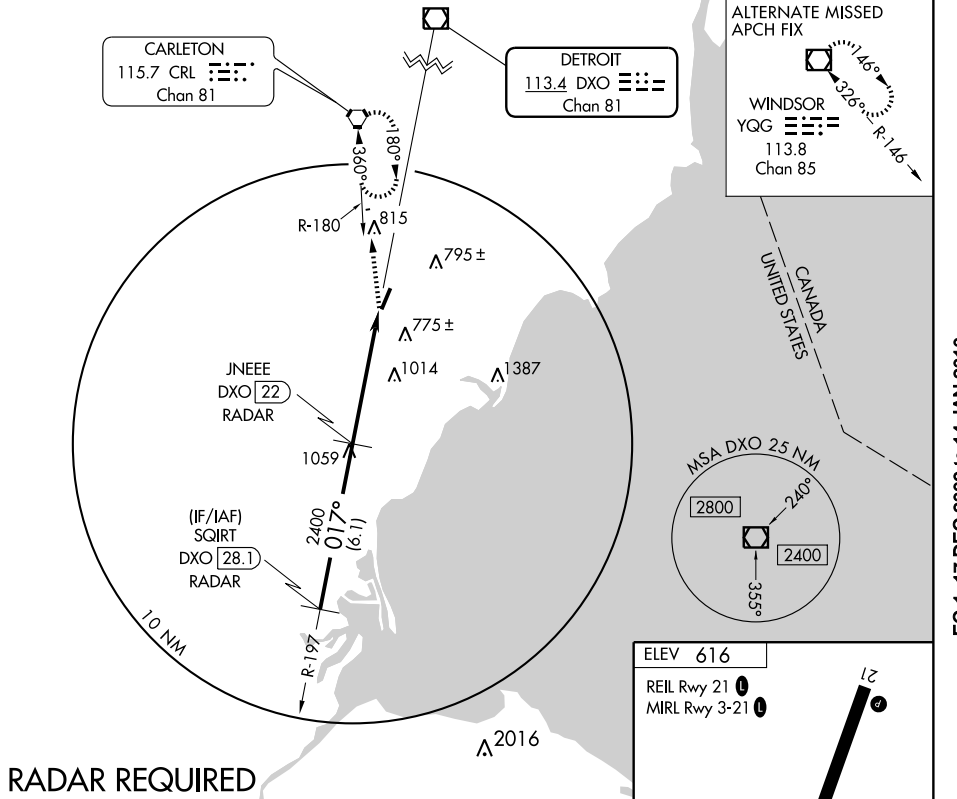
▼

▲

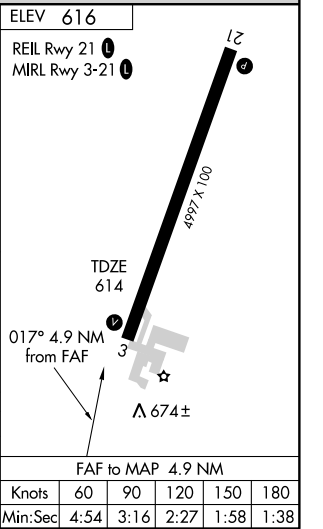
DME or RADAR required. When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase all MDAs 60 feet, and increase Cat C and D visibility ¼ mile.

MISSED APPROACH: Climb to 3000 direct CRL VORTAC and hold.

AWOS-3 119.075	DETROIT APP CON 134.3 363.2	GCO 121.725	UNICOM 122.7 (CTAF) 0
--------------------------	---------------------------------------	-----------------------	---------------------------------



CATEGORY	A	B	C	D
S-3	1320-1	706 (800-1)	1320-2 706 (800-2)	1320-2¼ 706 (800-2¼)
CIRCLING	1320-1	704 (800-1)	1320-2 704 (800-2)	1320-2¼ 704 (800-2¼)



EC-1.17 DEC 2009 to 14 JAN 2010

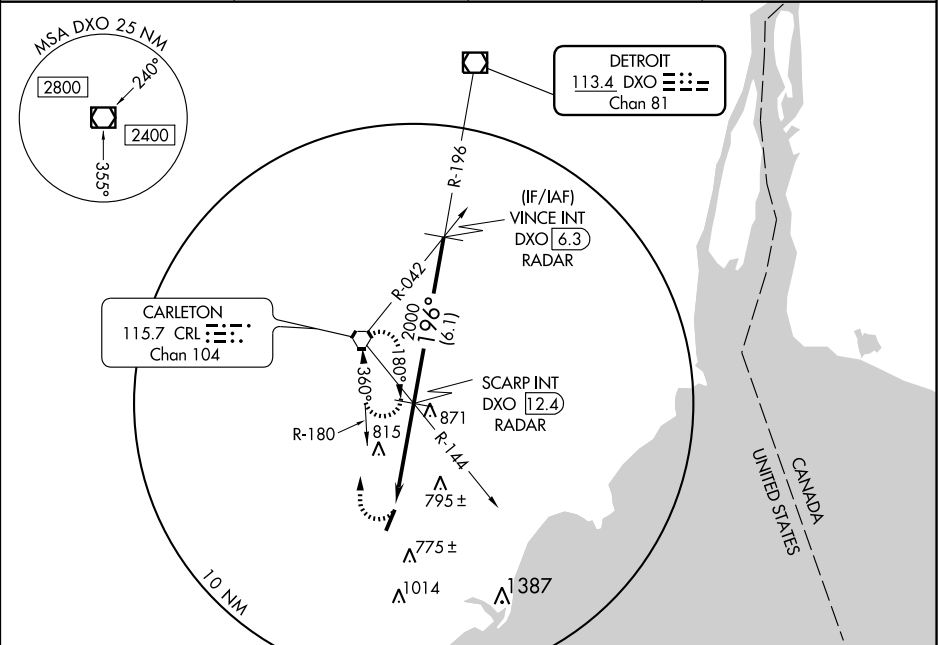
VOR/DME DXO	APP CRS	Rwy Idg	4997
113.4	196°	TDZE	616
Chan 81		Apt Elev	616

VOR RWY 21
MONROE/CUSTER (TTF*)

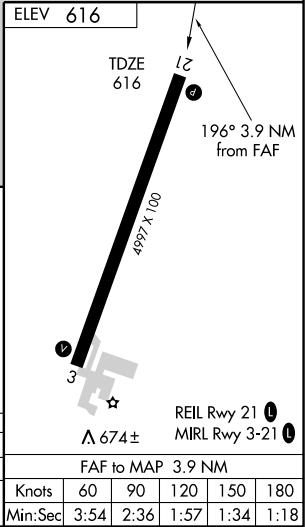
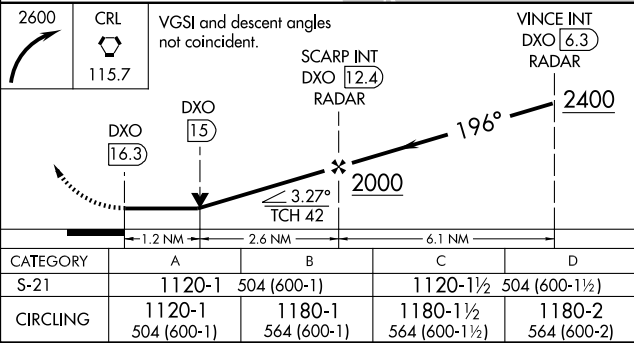
When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase all MDA 60 feet, and increase Cat C and D visibility ¼ mile. VDP NA when using Detroit Metropolitan Wayne County altimeter setting.

MISSED APPROACH: Climbing right turn to 2600 direct CRL VORTAC and hold.

AWOS-3 119.075	DETROIT APP CON 134.3 363.2	GCO 121.725	UNICOM 122.7 (CTAF) 0
-------------------	--------------------------------	----------------	--------------------------



RADAR REQUIRED

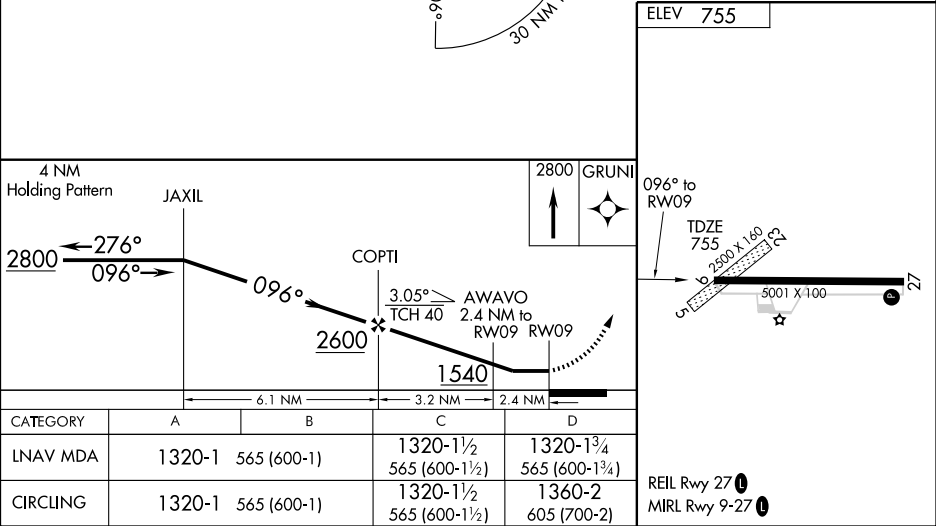
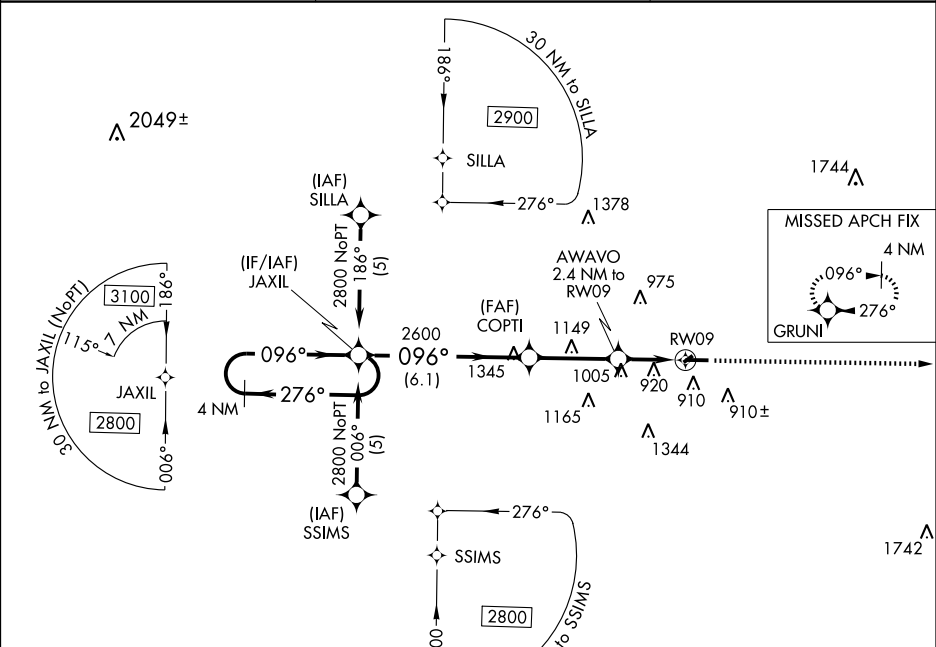


APP CRS	Rwy Idg	5001
096°	TDZE	755
	Apt Elev	755

RNAV (GPS) RWY 9
MOUNT PLEASANT MUNI (MOP)

<p>▼ DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received use Alma altimeter setting and increase all MDA 60 feet, increase LNAV Cat C/D and Circling Cat C visibility ½ mile.</p>	<p>MISSED APPROACH: Climb to 2800 direct GRUNI and hold.</p>
---	--

<p>AWOS-3 110.6</p>	<p>SAGINAW APP CON★ 126.45 235.625</p>	<p>UNICOM 123.0 (CTAF) 0</p>
-------------------------	--	----------------------------------



CATEGORY	A	B	C	D
LNAV MDA	1320-1	565 (600-1)	1320-1½ 565 (600-1½)	1320-1¾ 565 (600-1¾)
CIRCLING	1320-1	565 (600-1)	1320-1½ 565 (600-1½)	1360-2 605 (700-2)

REIL Rwy 27 0
MIRL Rwy 9-27 0

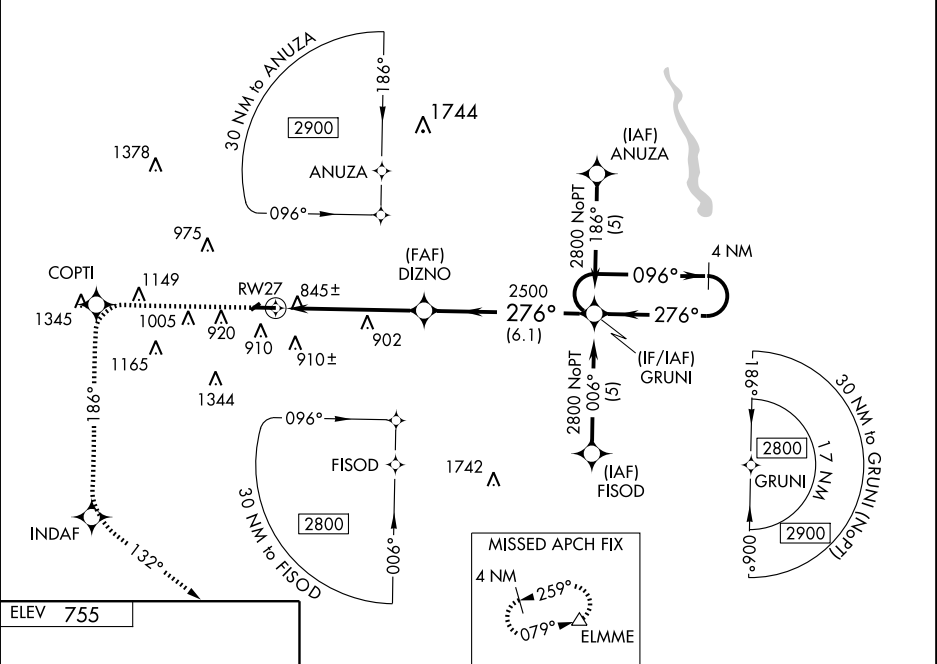
WAAS CH 82613 W27A	APP CRS 276°	Rwy Idg TDZE Apt Elev	5001 753 755
--	------------------------	-----------------------------	---

RNAV (GPS) RWY 27
MOUNT PLEASANT MUNI (MOP)

▽ For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Alma altimeter setting and increase all DA 42 feet and all MDA 60 feet, increase LPV, LNAV/VNAV all Cats, LNAV Cat D and Circling Cat C visibilities ¼ mile. Baro-VNAV and VDP NA when using Alma altimeter setting.

MISSED APPROACH: Climb to 3000 direct COPTI and via 186° track direct INDAP and via 132° track to ELMME and hold.

AWOS-3 110.6	SAGINAW APP CON★ 126.45 235.625	UNICOM 123.0 (CTAF) 0
------------------------	---	---------------------------------



ELEV 755		3000 COPTI		TRK 186°	INDAP	TRK 132°	ELMME	GRUNI 4 NM Holding Pattern	
*LNAV only		DIZNO		276°		2500		GS 3.00° TCH 37	
RW27		1.2 NM to RW27		4.1 NM		6.1 NM			
CATEGORY		A		B		C		D	
LPV DA		1099-1¼		346 (400-1¼)					
LNAV/VNAV DA		1201-1½		448 (500-1½)					
LNAV MDA		1160-1		407 (500-1)		1160-1¼		407 (500-1¼)	
CIRCLING		1220-1		465 (500-1)		1320-1½		1360-2	
						565 (600-1½)		605 (700-2)	

REIL Rwy 27 0
MIRL Rwy 9-27 0

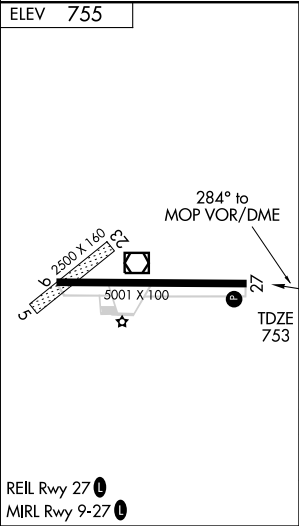
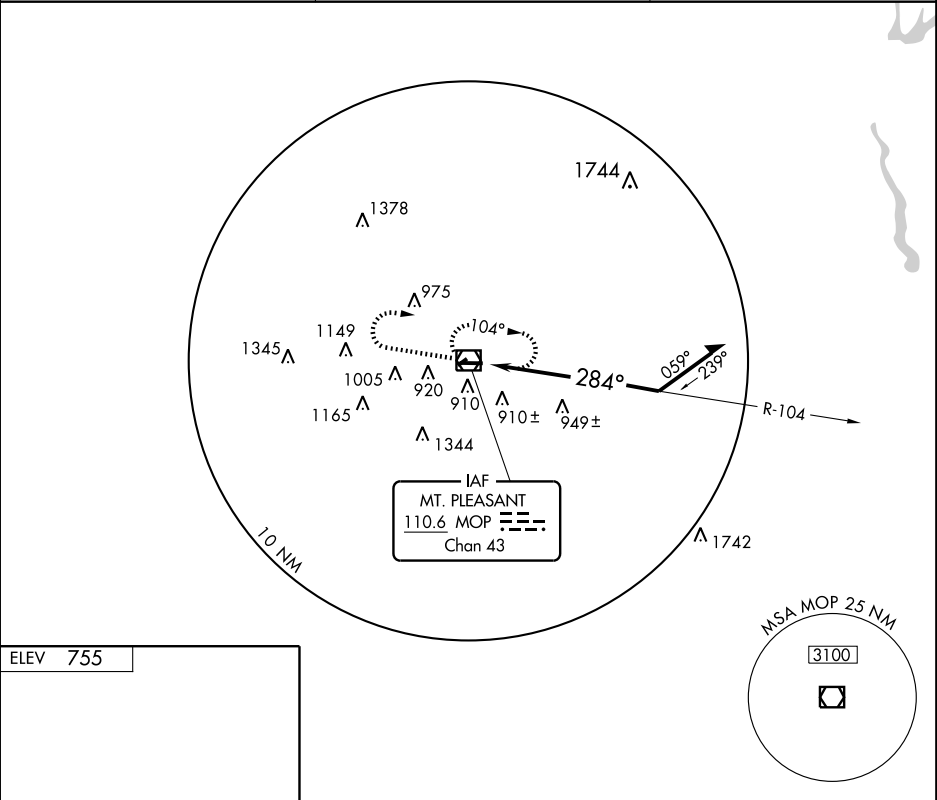
VOR/DME MOP	APP CRS	Rwy Idg	5001
110.6	284°	TDZE	753
Chan 43		Apt Elev	755

VOR RWY 27
MOUNT PLEASANT MUNI (MOP)

▼ Visibility reduction by helicopters NA. When local altimeter setting not received, use Alma altimeter setting and increase all MDA 60 feet, S-27 Cat D and Circling Cat C visibilities ¼ mile. VDP NA when using Alma altimeter setting.

MISSED APPROACH: Climb to 2400 then right turn direct MOP VOR/DME and hold.

AWOS-3 110.6	SAGINAW APP CON ★ 126.45 235.625	UNICOM 123.0 (CTAF) 0
-----------------	-------------------------------------	--------------------------



2400	MOP 110.6	VOR/DME 6000	104°	2400	284°	MOP 2	Remain within 10 NM
CATEGORY	A	B	C	D			
S-27	1260-1	507 (600-1)	1260-1½	507 (600-1½)			
CIRCLING	1260-1	505 (600-1)	1320-1½ 565 (600-1½)	1360-2 605 (700-2)			

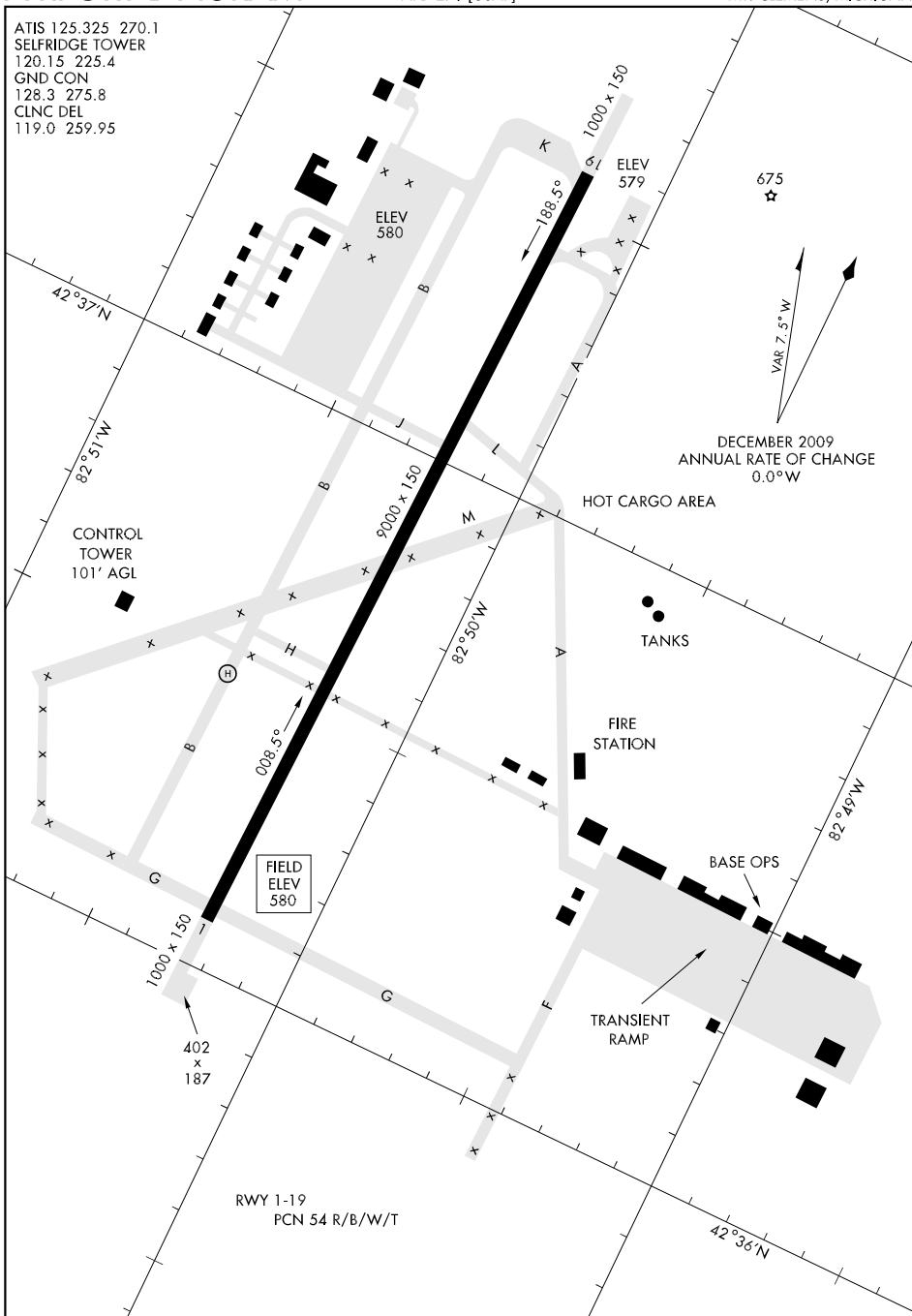
AIRPORT DIAGRAM

AFD-276 [USAF]

MT. CLEMENS, MICHIGAN

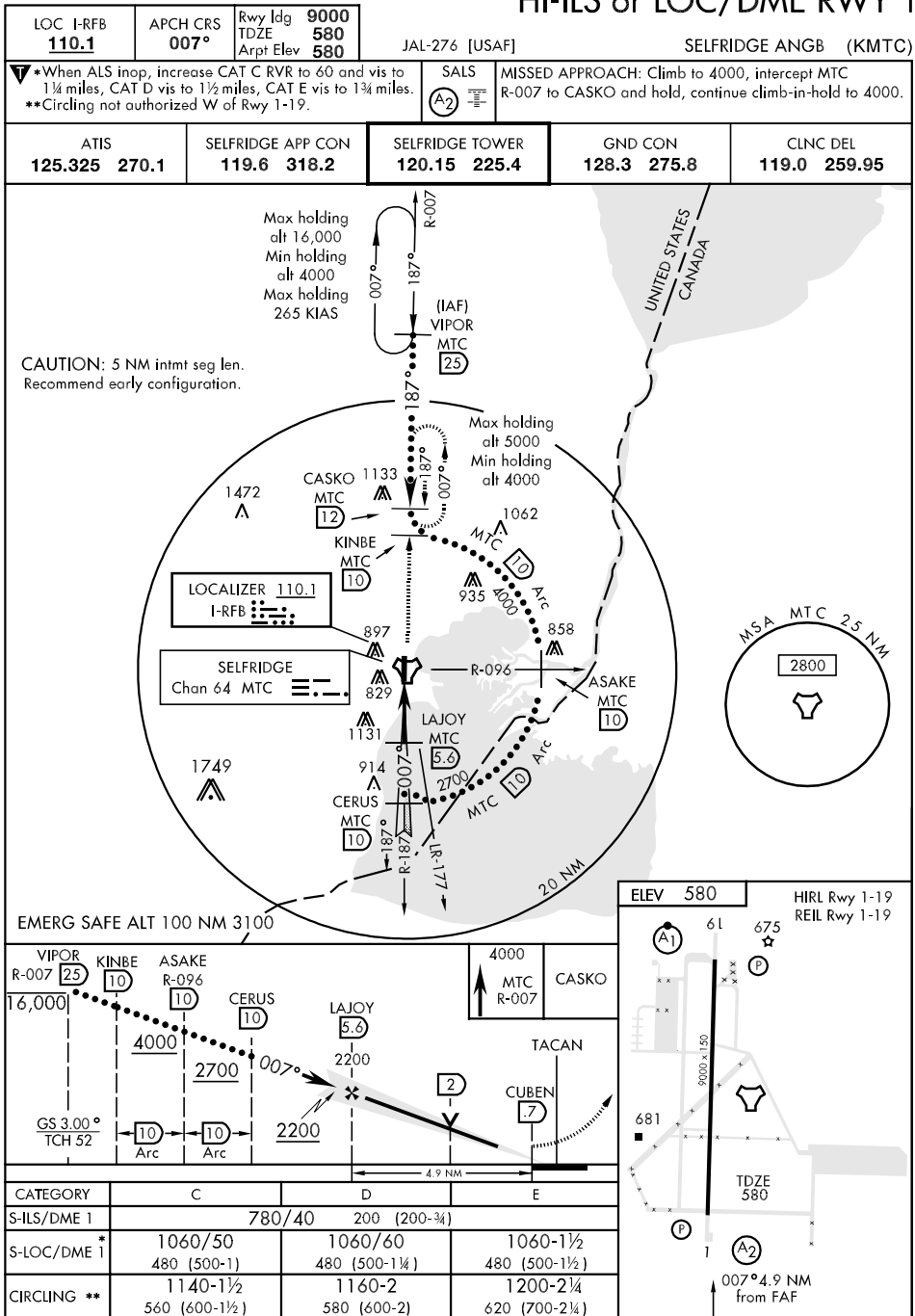
ATIS 125.325 270.1
SELFRIDGE TOWER
120.15 225.4
GND CON
128.3 275.8
CLNC DEL
119.0 259.95

EC-1, 17 DEC 2009 to 14 JAN 2010



AIRPORT DIAGRAM

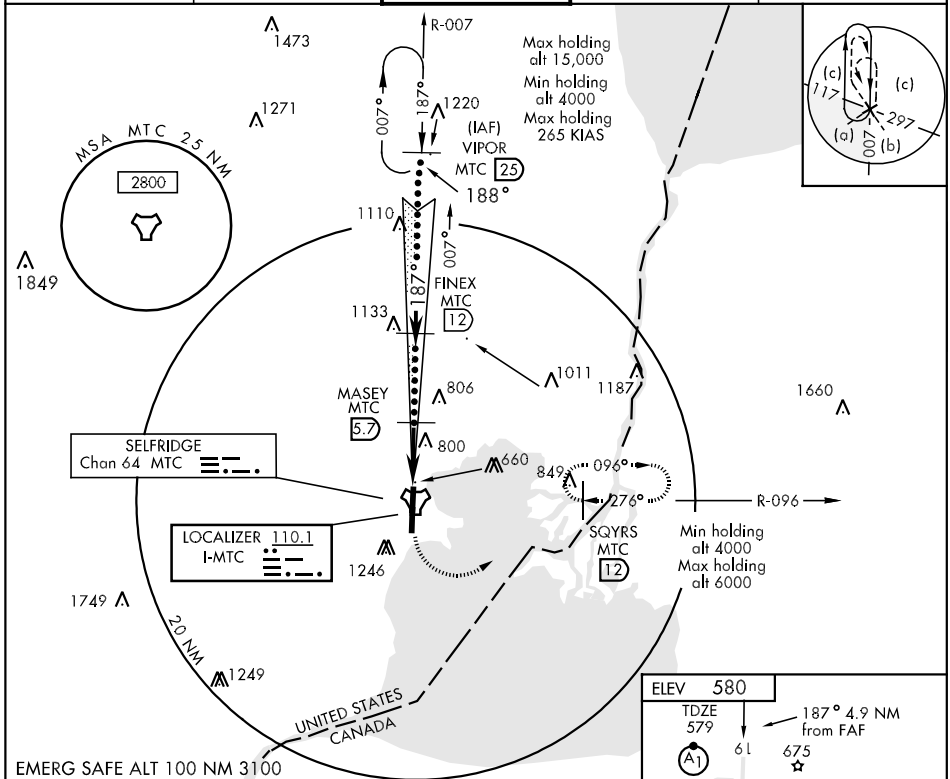
MT. CLEMENS, MICHIGAN



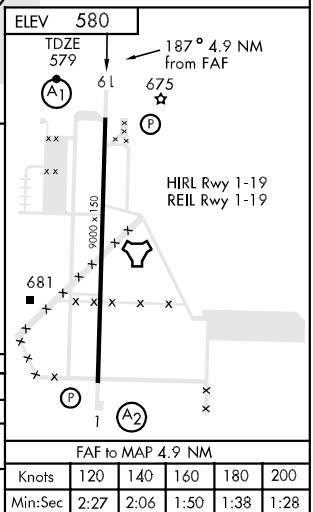
LOC I-MTC 110.1	APCH CRS 187°	Rwy ldg TDZE Arpt Elev 9000 579 580	JAL-276 [USAF]	SELFRIDGE ANGB (KMTC)
---------------------------	-------------------------	---	----------------	-----------------------

<p>▼ * When ALS inop, increase RVR to 50 and vis to 1 mile.</p> <p>** When ALS inop, increase CAT CD vis to 1½ miles, CAT E vis to 1¾ miles.</p> <p>*** Circling not authorized W of Rwy 1-19.</p>	<p>ALSF-1</p> <p>A1</p>	<p>MISSED APPROACH: Climbing left turn to 4000, intercept MTC R-096 to SQYRS and hold, continue climb-in-hold to 4000..</p>
--	--------------------------------	---

ATIS 125.325 270.1	SELFRIDGE APP CON 119.6 318.2	SELFRIDGE TOWER 120.15 225.4	GND CON 128.3 275.8	CLNC DEL 119.0 259.95
------------------------------	---	--	-------------------------------	---------------------------------

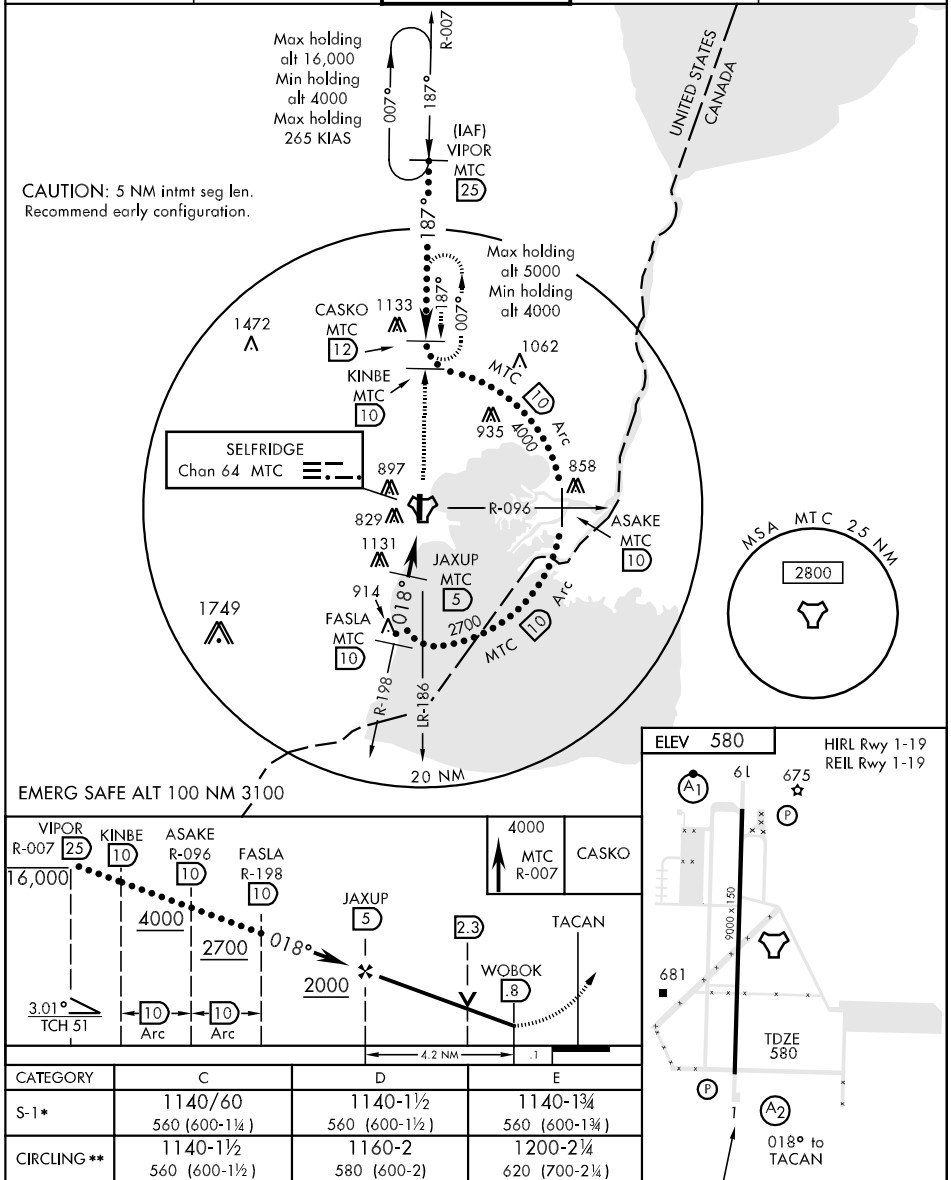


4000 MTC R-096	SQYRS	MASEY MTC 5.7	FINEX MTC 12	VIPOR R-007 MTC 25
TACAN HAMUK 0.3	MTC 2.2	2700	GS 3.00° TCH 52	15,000
4.9 NM				
CATEGORY	C	D	E	
S-ILS 19*	882/40	303 (400-¾)		
S-LOC 19**	1080/50	501 (500-1)	1080/60 501 (500-1¼)	
CIRCLING	1140-1½ 560 (600-1½)	1160-2 580 (600-2)	1200-2¼ 620 (700-2¼)	



TACAN MTC Chan 64	APCH CRS 018°	Rwy Idg TDZE Arpt Elev 9000 580 580	JAL-276 [USAF]	SELFDRIDGE ANGB (KMTC)
▼ *When ALS inop, increase CAT C vis to 1½ miles, CAT D vis to 1¾ miles, CAT E vis to 2 miles. ** Circling not authorized W of Rwy 1-19.			SALS 	MISSED APPROACH: Climb to 4000 and intercept MTC R-007 to CASKO and hold, continue climb-in-hold to 4000.

ATIS 125.325 270.1	SELFDRIDGE APP CON 119.6 318.2	SELFDRIDGE TOWER 120.15 225.4	GND CON 128.3 275.8	CLNC DEL 119.0 259.95
------------------------------	--	---	-------------------------------	---------------------------------



TACAN MTC Chan 64	APCH CRS 177°	Rwy Idg 9000 TDZE 579 Arpt Elev 580
-----------------------------	-------------------------	--

JAL-276 [USAF]

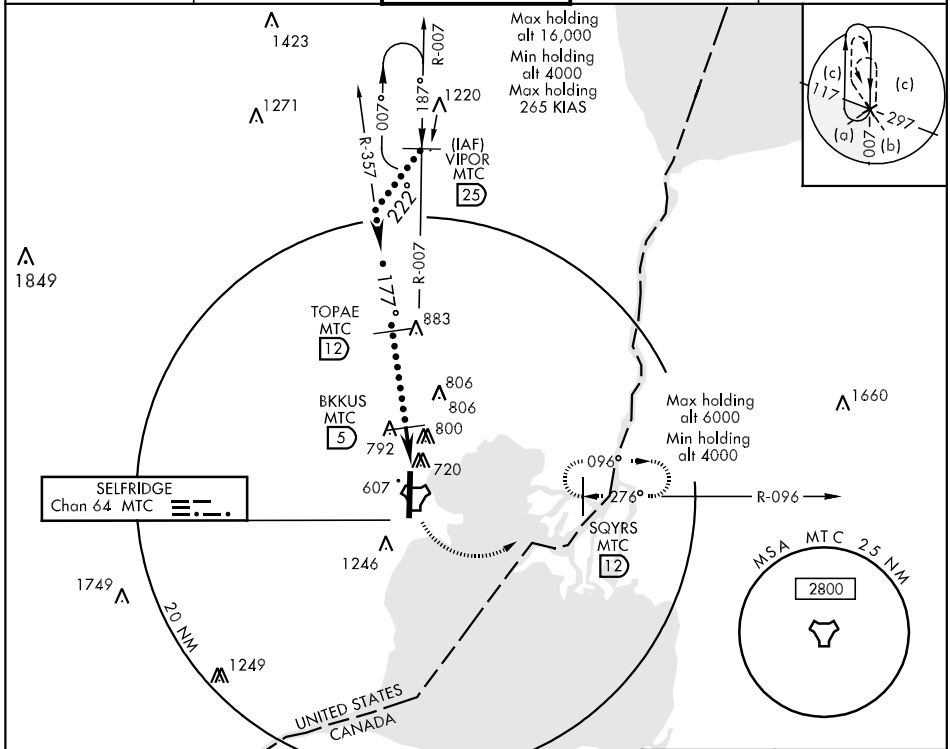
SELFRRIDGE ANGB (KMTC)

T * When ALS inop, increase CAT C vis to 1¾ miles,
CAT D vis to 2 miles, CAT E vis to 2¼ miles.
* * Circling not authorized W of Rwy 1-19.

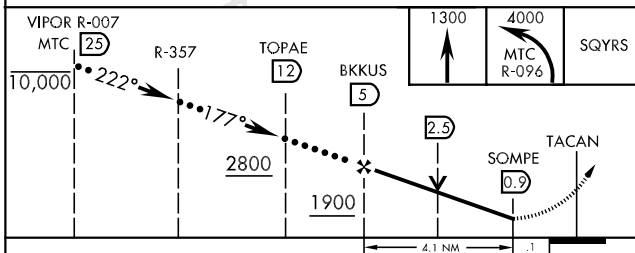


MISSED APPROACH: Climb to 1300 then climbing left turn to 4000, intercept MTC TACAN R-096 to SQYRS and hold, continue climb-in-hold to 4000.

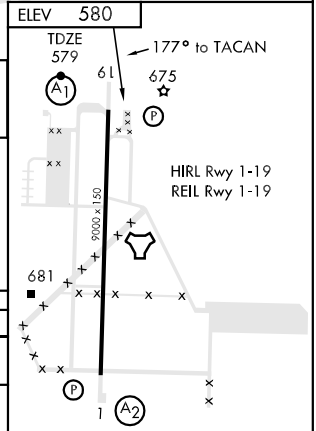
ATIS	SELFTRIDGE APP CON	SELFTRIDGE TOWER	GND CON	CLNC DEL
125.325 270.1	119.6 318.2	120.15 225.4	128.3 275.8	119.0 259.95



EMERG SAFE ALT 100 NM 3100



CATEGORY	C	D	E
S- 19 *	1180/60 601 (600-1¼)	1180-1½ 601 (600-1½)	1180-1¾ 601 (600-1¾)
CIRCLING **	1180-1¾ 600 (600-1¾)	1180-2 600 (600-2)	1200-2¼ 620 (700-2¼)



LOC I-RFB <u>110.1</u>	APCH CRS 007°	Rwy Idg 9000 TDZE 580 Arpt Elev 580
----------------------------------	-------------------------	--

AL-276 [USAF]

SELFRIIDGE ANGB (KMTC)

V*When ALS inop, increase CAT AB RVR to 40 and vis to $\frac{3}{4}$ mile.
******When ALS inop, increase CAT AB RVR to 50 and vis to 1 mile, CAT
 C RVR to 60 and vis to $1\frac{1}{4}$ mile, CAT D vis to $1\frac{1}{2}$, CAT E vis to $1\frac{3}{4}$.

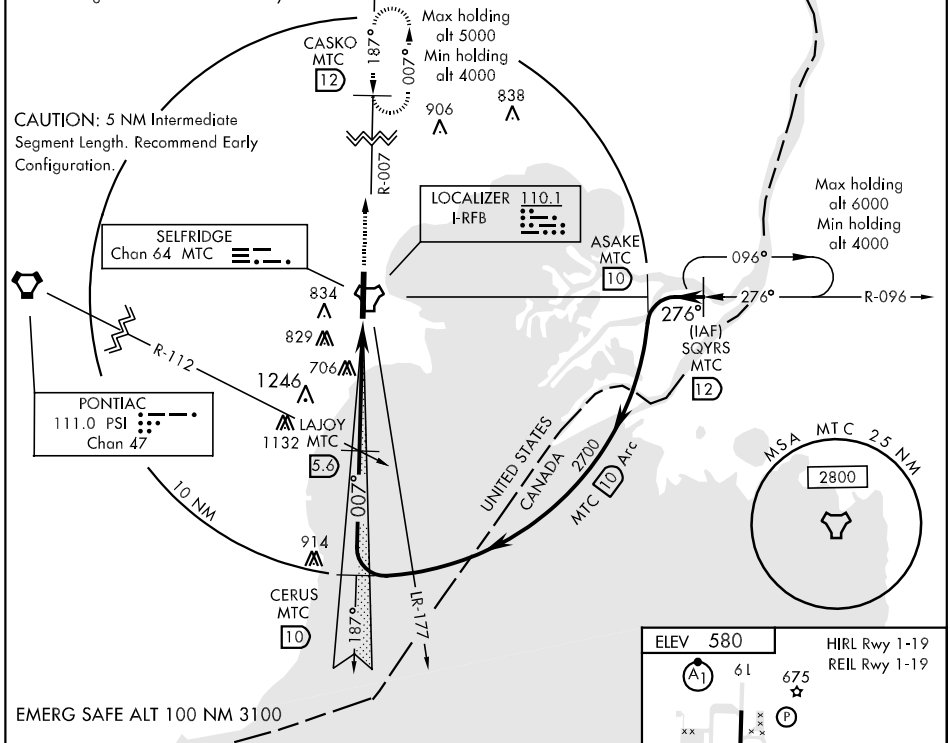
SALS

A₂ ䷢

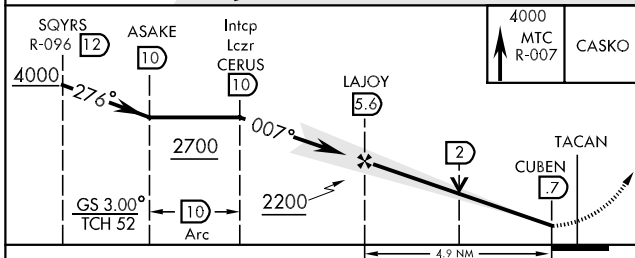
MISSED APPROACH: Climb to 4000, intercept MTC R-007 to CASKO and hold, continue climb-in-hold to 4000.

ATIS 125.325 270.1	SELFRIDGE APP CON 119.6 318.2	SELFRIDGE TOWER 120.15 225.4	GND CON 128.3 275.8	CLNC DEL 119.0 259.95
-----------------------	----------------------------------	---------------------------------	------------------------	--------------------------

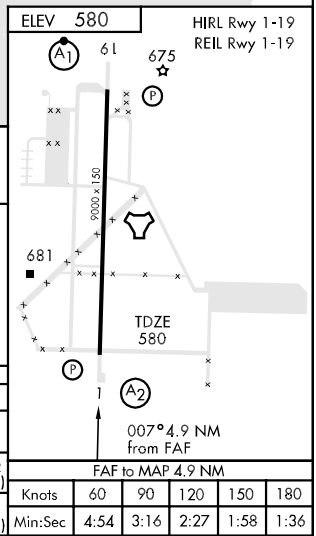
*** Circling not authorized W of Rwy 1-19.



EMERG SAFE ALT 100 NM 3100



CATEGORY	A	B	C	D	E
S-ILS 01*	780/24	200 (200-½)	780/40	200 (200-¾)	
S-LOC 01**	1060/40	480 (500-¾)	1060/50 480 (500-1)	1060/60 480 (500-1¼)	1060-1½ 480 (500-1½)
CIRCLING ***	1140-1	560 (600-1)	1140-1½ 560 (600-1½)	1160-2 580 (600-2)	1200-2 ¼ 620 (700-2 ¼)

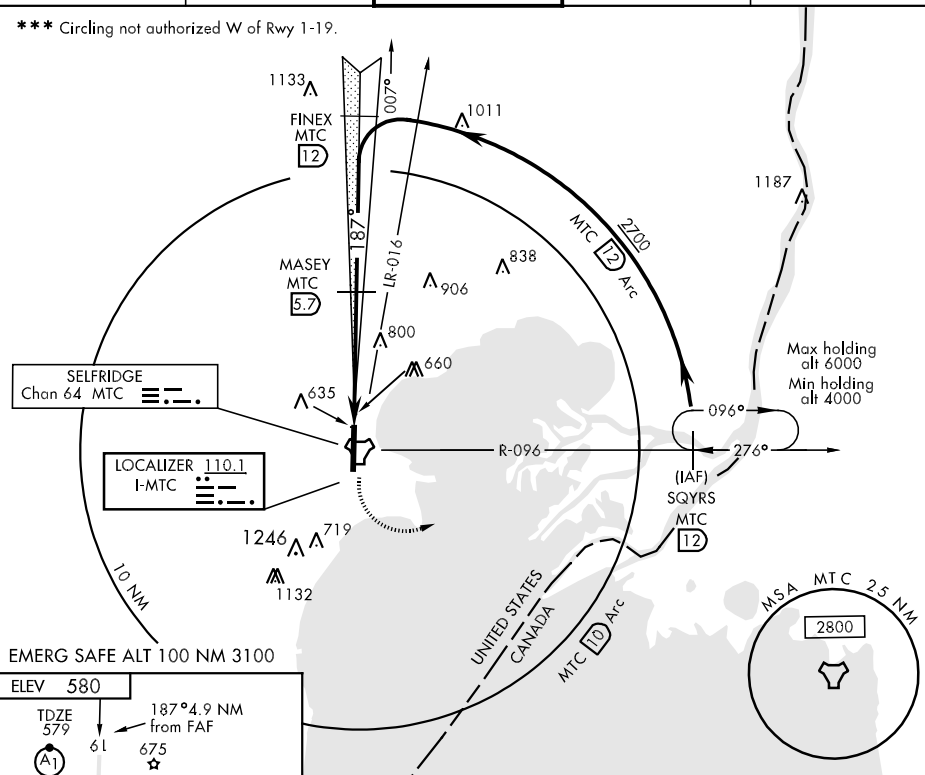


LOC I-MTC 110.1	APCH CRS 187°	Rwy Idg TDZE Arpt Elev 9000 579 580	AL-276 [USAF]	SELFDRIGE ANGB (KMTC)
---------------------------	-------------------------	---	---------------	-----------------------

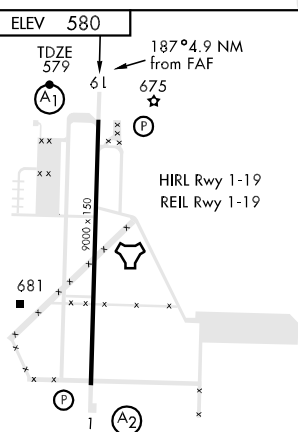
▼ * When ALS inop, increase RVR to 50 and vis to 1 mile. ** When ALS inop, increase CAT AB RVR to 50 and vis to 1 mile, CAT C/D vis to 1½ miles, CAT E vis to 1¾ miles.	ALSF-1 	MISSED APPROACH: Climbing left turn to 4000, intercept MTC TACAN R-096 to SQYRS and hold, continue climb-in-hold to 4000.
--	------------	---

ATIS 125.325 270.1	SELFDRIGE APP CON 119.6 318.2	SELFDRIGE TOWER 120.15 225.4	GND CON 128.3 275.8	CLNC DEL 119.0 259.95
------------------------------	---	--	-------------------------------	---------------------------------

*** Circling not authorized W of Rwy 1-19.



EMERG SAFE ALT 100 NM 3100



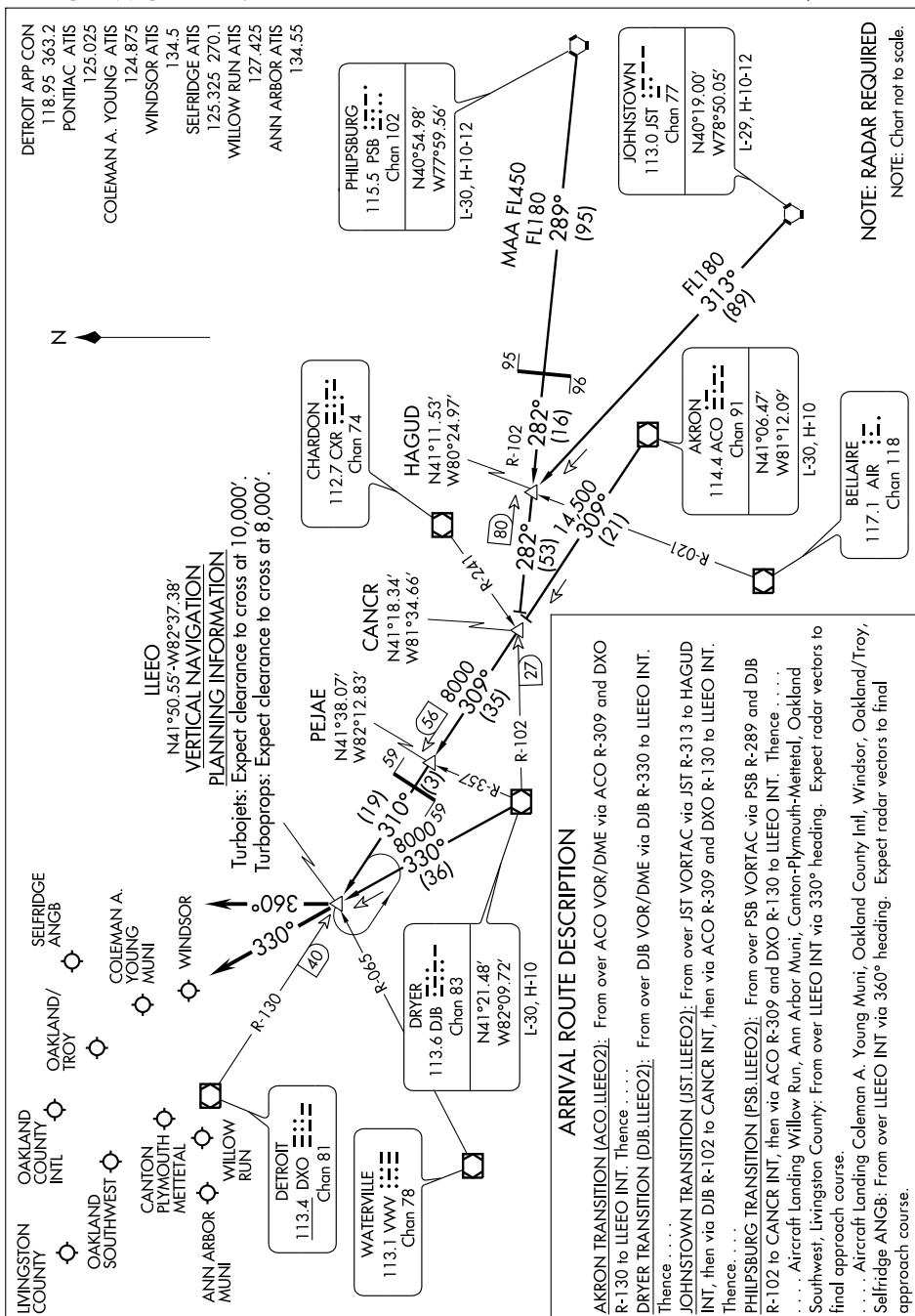
4000 MTC R-096	MTC R-096 12	SQYRS	MASEY 5.7	Intcp Lczt FINEX 12	SQYRS R-096 12	4000
TACAN HAMUK .8	2.2	187°	2700	12 Arc	GS 3.00° TCH 52	
4.9 NM						
CATEGORY	A	B	C	D	E	
S-ILS 19*	882/40 303 (400-¾)					
S-LOC 19**	1080/40	501 (500-¾)	1080/50	501 (500-1)	1080/60 501 (500-1¼)	
CIRCLING ***	1140-1	560 (600-1)	1140-1½ 560 (600-1½)	1160-2 580 (600-2)	1200-2¼ 620 (700-2¼)	

FAF to MAP 4.9 NM

Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

LEEO TWO ARRIVAL

DETROIT, MICHIGAN



ARRIVAL ROUTE DESCRIPTION

AKRON TRANSITION (ACO.LLEEO2): From over ACO VOR/DME via ACO R-309 and DXO R-130 to LLEEO INT. Thence
 DRYER TRANSITION (DJB.LLEEO2): From over DJB VOR/DME via DJB R-330 to LLEEO INT. Thence
 JOHNSTOWN TRANSITION (JST.LLEEO2): From over JST VORTAC via JST R-313 to HAGUD INT, then via DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence
 PHILPSBURG TRANSITION (PSB.LLEEO2): From over PSB VORTAC via PSB R-289 and DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence
 Aircraft Landing Willow Run, Ann Arbor Muni, Canton-Plymouth-Merritt, Oakland Southwest, Livingston County: From over LLEEO INT via 330° heading. Expect radar vectors to final approach course.
 Aircraft Landing Coleman A. Young Muni, Oakland County Intl, Windsor, Oakland/Troy Selfridge ANGB: From over LLEEO INT via 360° heading. Expect radar vectors to final approach course.

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON

127.5 239.275

WILLOW RUN ATIS 127.425

PONTIAC ATIS 125.025

COLEMAN A. YOUNG ATIS 124.875

WINDSOR ATIS 134.5

SELFREDGE ATIS 125.325 270.1

SPRTN

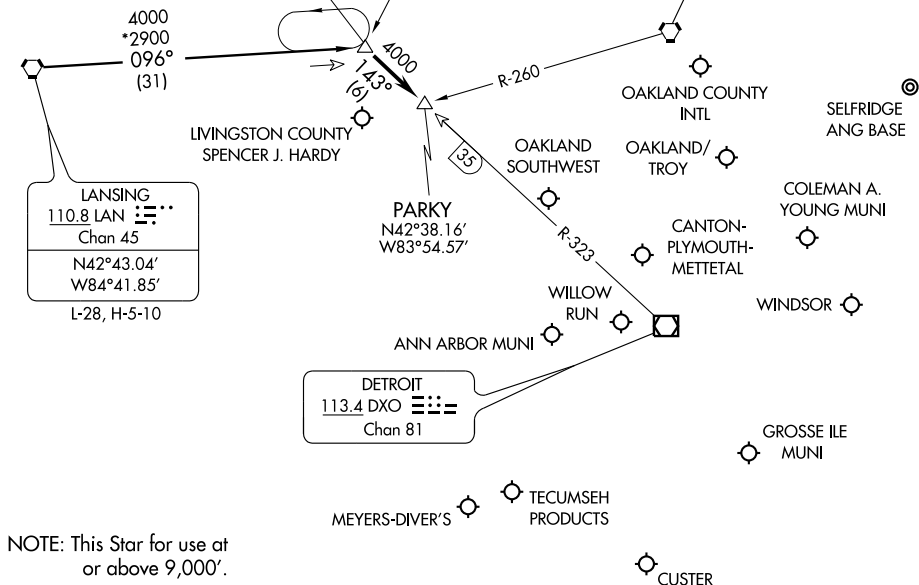
N42°42.52'-W84°00.23'

VERTICAL NAVIGATION

PLANNING INFORMATION

TURBOJETS/TURBOPROPS:

Expect clearance to cross at 9000'.

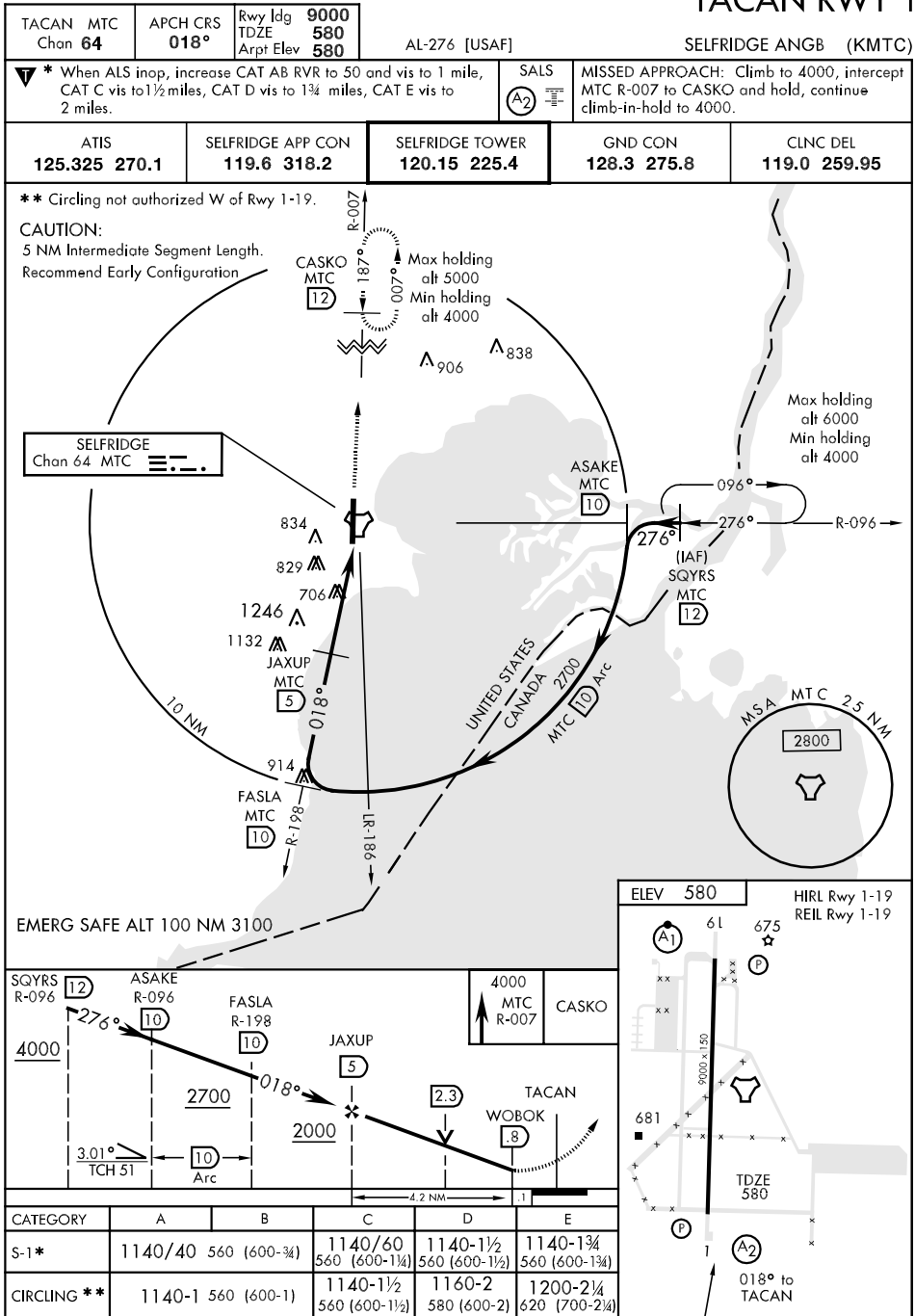


LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence

. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ,

1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence

. . . . Expect radar vectors to final approach course.

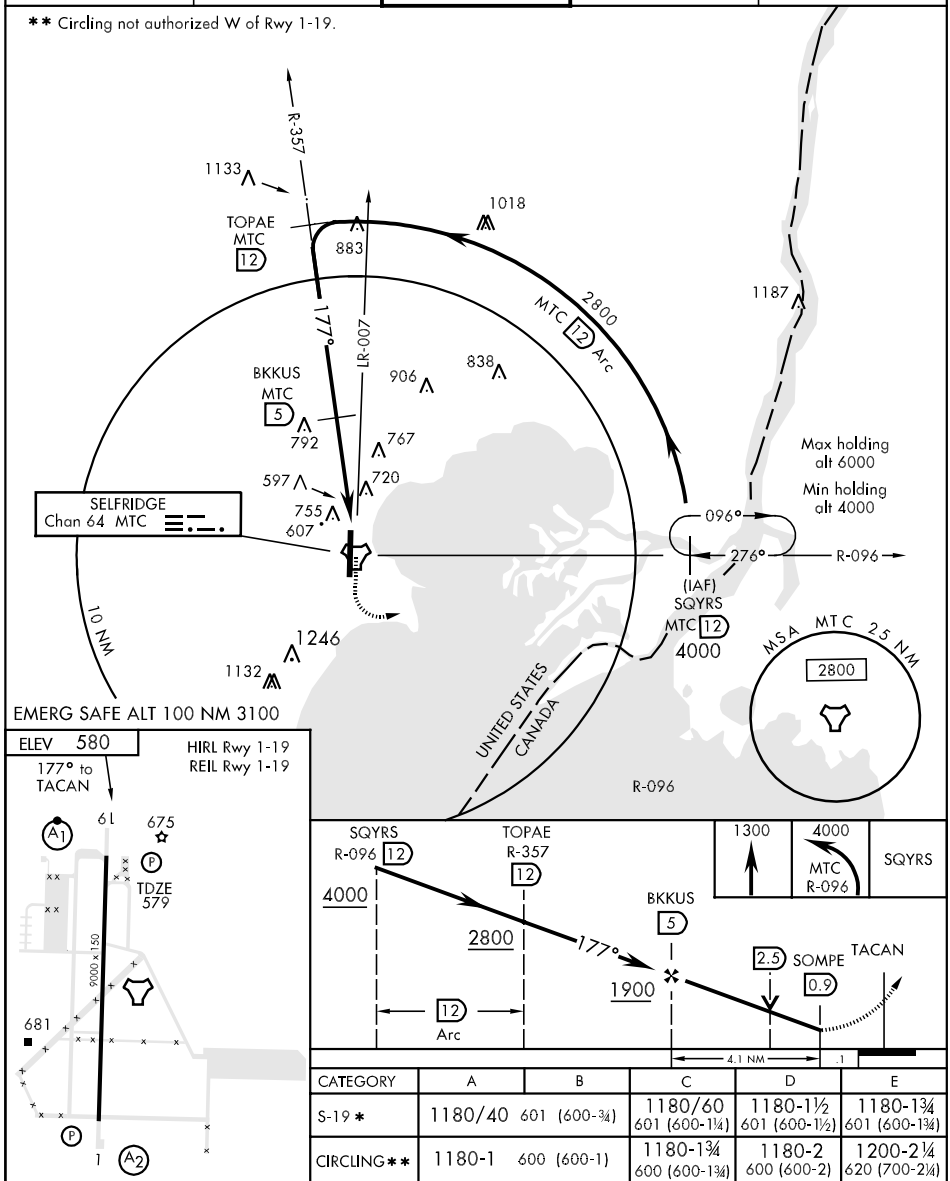


TACAN MTC Chan 64	APCH CRS 177°	Rwy Idg TDZE Arpt Elev 9000 579 580	AL-276 [USAF]	SELFDRIGE ANGB (KMTC)
-----------------------------	-------------------------	---	---------------	-----------------------

▼ * When ALS inop, increase CAT AB RVR to 50 and vis to 1 mile, CAT C vis to 1¾ miles, CAT D vis to 2 miles, CAT E vis to 2¼ miles.	ALSF-1 	MISSED APPROACH: Climb to 1300 then climbing left turn to 4000, intercept MTC TACAN R-096 to SQYRS and hold, continue climb-in-hold to 4000.
--	------------	---

ATIS 125.325 270.1	SELFDRIGE APP CON 119.6 318.2	SELFDRIGE TOWER 120.15 225.4	GND CON 128.3 275.8	CLNC DEL 119.0 259.95
------------------------------	---	--	-------------------------------	---------------------------------

** Circling not authorized W of Rwy 1-19.



AIRPORT DIAGRAM

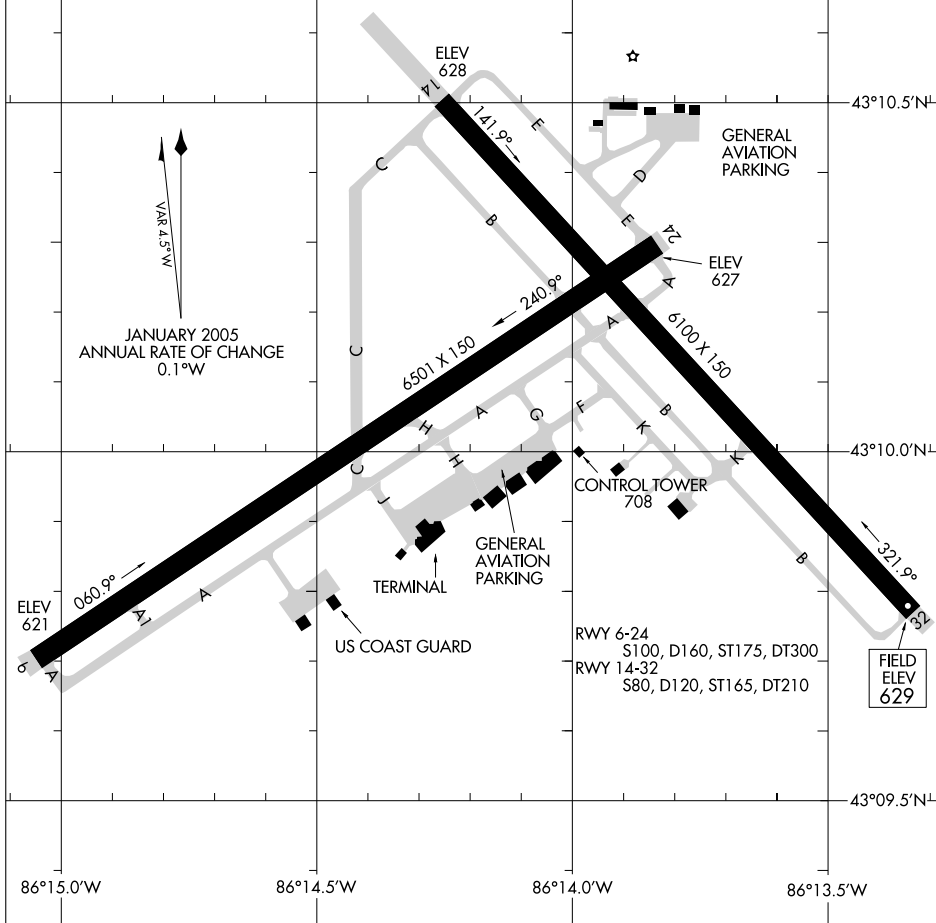
AL-278 (FAA)

MUSKEGON COUNTY (MKG)
MUSKEGON, MICHIGAN

ATIS
124.3
MUSKEGON TOWER ★
126.25 363.1
GND CON
121.6

D



CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.



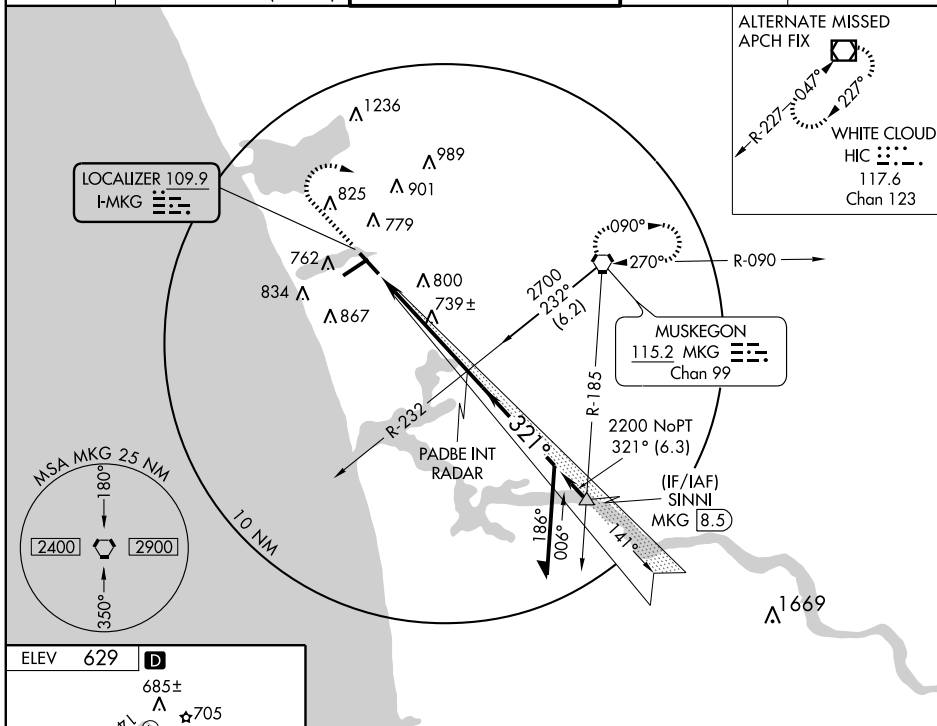
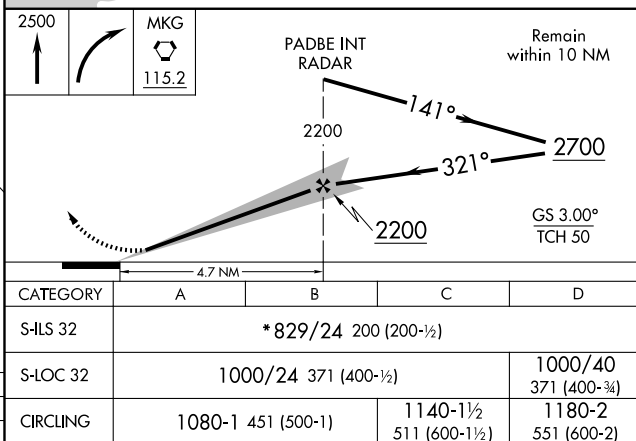
EC-1, 17 DEC 2009 to 14 JAN 2010

LOC I-MKG <u>109.9</u>	APP CRS 321°	Rwy Idg 6100 TDZE 629 Apt Elev 629
----------------------------------	------------------------	---

ILS or LOC RWY 32
MUSKEGON COUNTY (MKG)

 ASR	<p>*RVR 1800 authorized with the use of FD or AP or HUD to DA. When local altimeter setting not received, use Fremont altimeter setting and increase DA 65 feet, and all MDA 80 feet, increase S-LOC Cat C visibility to RVR 4000, Cat D visibility to RVR 5000.</p>	 MALSR	<p>MISSED APPROACH: Climb to 2500 then right turn direct MKG VORTAC and hold.</p>
--	---	--	---

ATIS 124.3	MUSKEGON APP CON ★ 118.2 339.1 (N of V2) 119.8 339.1 (S of V2)	MUSKEGON TOWER ★ 126.25 (CTAF) 0 363.1	GND CON 121.6	UNICOM 122.95
----------------------	--	--	-------------------------	-------------------------

[illegible]

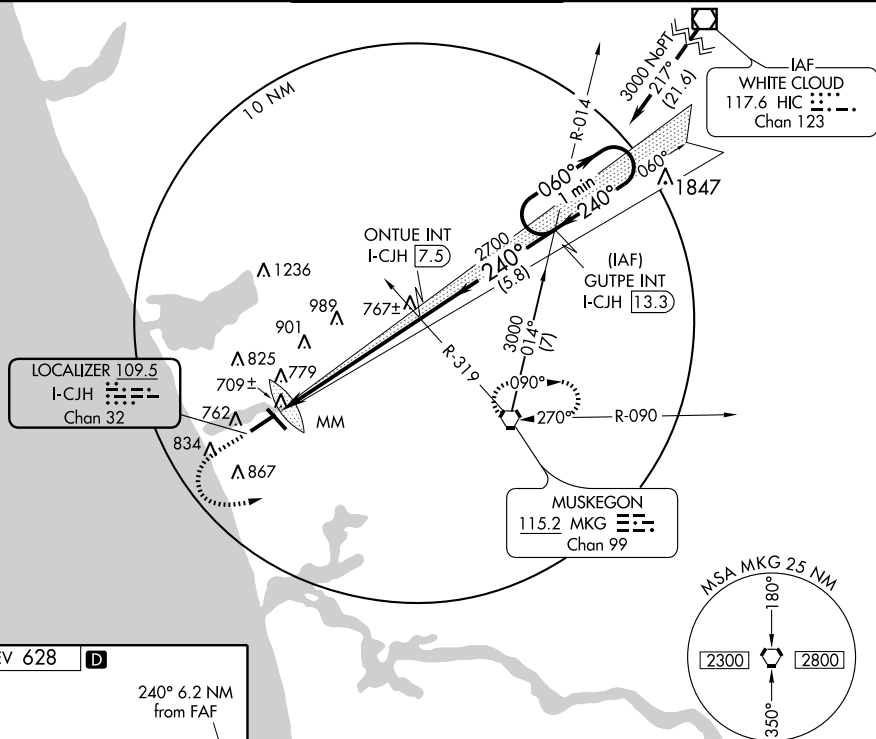
AL-278 (FAA)

ILS RWY 24
MUSKEGON COUNTY (MKG)



MISSED APPROACH: Climb to 2500 then left turn direct MKG VORTAC and hold.

ATIS	MUSKEGON APP CON ★	MUSKEGON TOWER ★	GND CON	UNICOM
124.3	118.2 339.1 (N of V2) 119.8 339.1 (S of V2)	126.25 (CTAF) 0 363.1	121.6	122.95



EC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 628	D
----------	---

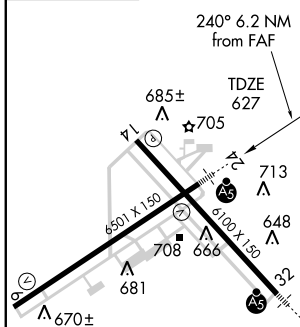


Figure 1: Example of a flight profile. The diagram shows a flight path starting at 2500 feet, climbing to 2700 feet, and then leveling off at 3000 feet. Key points include I-CJH (1.3), ONTUE INT I-CJH (7.5), and GUTPE INT I-CJH (13.3). The profile includes a 240-degree turn and a 060-degree turn. The distance between the 2700-foot points is 5.8 NM. The profile is labeled "One Minute Holding Pattern" and "GS 3.00° TCH 56".

REIL Rwy 6 and 14 L					
HIRL Rwy 6-24 and 14-32 L					
FAF to MAP 6.2 NM					
Knots	60	90	120	150	180
Min:Sec	5:54	3:56	2:57	2:22	1:58

CATEGORY	A	B	C	D
S-ILS 24	827- $\frac{1}{2}$ 200 (200- $\frac{1}{2}$)			
S-LOC 24	980- $\frac{1}{2}$ 353 (400- $\frac{1}{2}$)			980- $\frac{3}{4}$ 353 (400- $\frac{3}{4}$)
CIRCLING	1080-1 452 (500-1)		1140-1 $\frac{1}{2}$ 512 (600-1 $\frac{1}{2}$)	1180-2 552 (600-2)

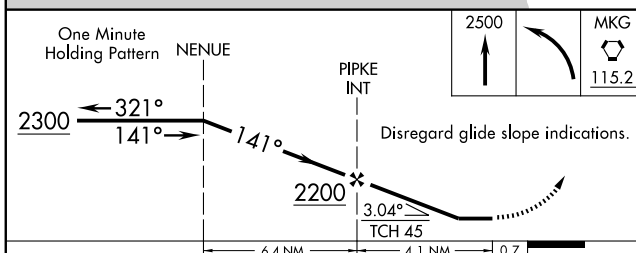
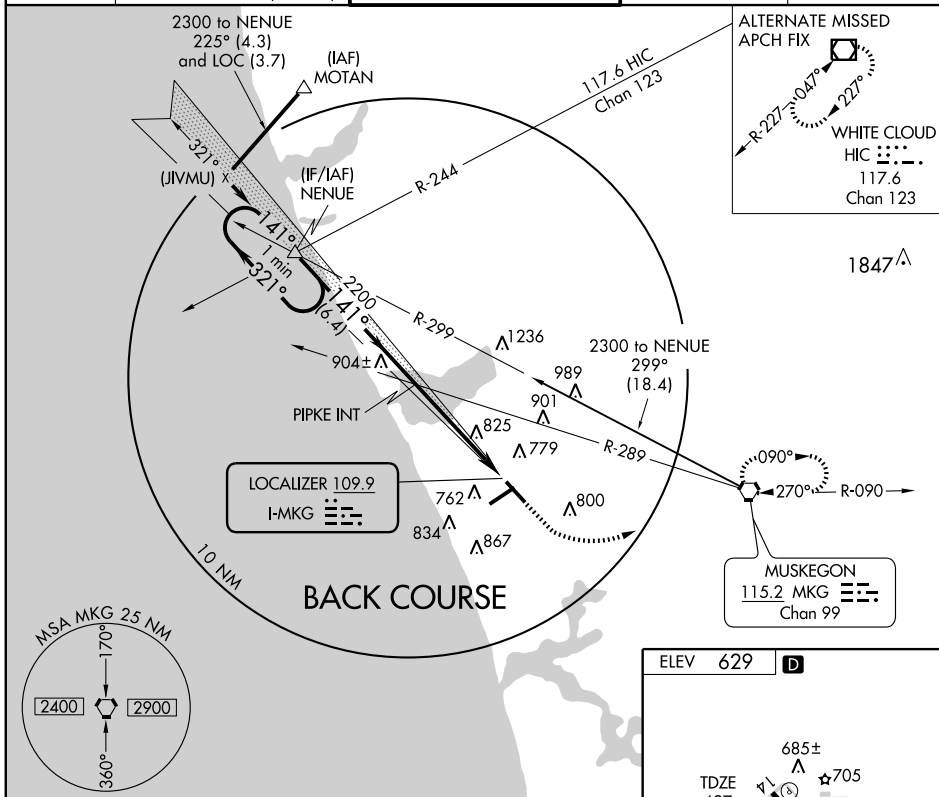
LOC I-MKG 109.9	APP CRS 141°	Rwy Idg TDZE Apt Elev	6100 627 629
---------------------------	------------------------	-----------------------------	---

LOC BC RWY 14

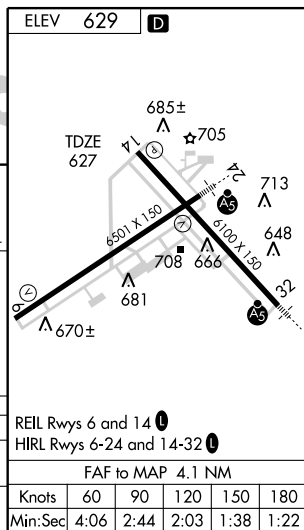
MUSKEGON COUNTY (MKG)

<p>Visibility reduction by helicopters NA. When local altimeter setting not received, use Fremont altimeter setting and increase all MDA 80 feet.</p>	<p>MISSED APPROACH: Climb to 2500 then left turn direct MKG VORTAC and hold.</p>
---	--

ATIS 124.3	MUSKEGON APP CON ★ 118.2 339.1 (N of V2) 119.8 339.1 (S of V2)	MUSKEGON TOWER ★ 126.25 (CTAF) 363.1	GND CON 121.6	UNICOM 122.95
----------------------	--	---	-------------------------	-------------------------



CATEGORY	A	B	C	D
S-14	1140-1 513 (600-1)		1140-1½ 513 (600-1½)	1140-1¾ 513 (600-1¾)
CIRCLING	1140-1 511 (600-1)		1140-1½ 511 (600-1½)	1180-2 551 (600-2)



▼

NA

ASR

IAF

ARM APPROACH MODE PRIOR TO IAF.

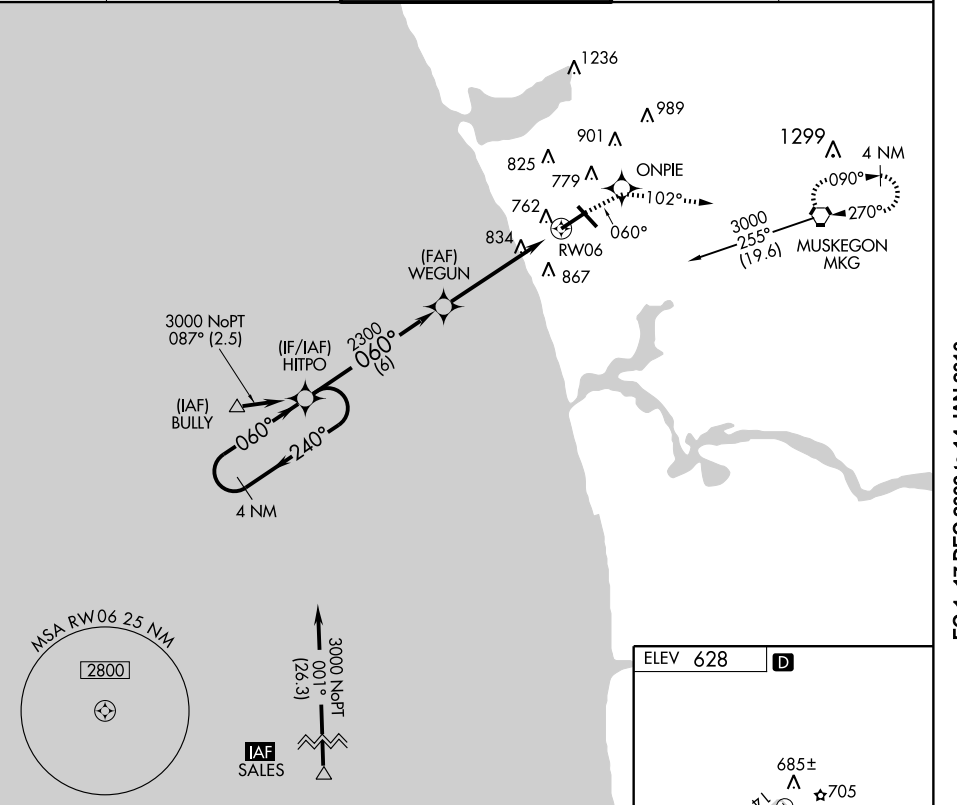
GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.

MISSED APPROACH:

Climb to 2500 via 060° course to ONPIE

Wp and right turn via 102° track to MKG VORTAC and hold.

<div>ATIS</div> <div>124.3</div>	<div>MUSKEGON APP CON ★</div> <div>118.2 339.1 (N of V2)</div> <div>119.8 339.1 (S of V2)</div>	<div>MUSKEGON TOWER ★</div> <div>126.25 (CTAF) 363.1</div>	<div>GND CON</div> <div>121.6</div>	<div>UNICOM</div> <div>122.95</div>
----------------------------------	---	--	-------------------------------------	-------------------------------------



4 NM Holding Pattern

HITPO

3000

240°

060°

WEGUN

060°

2300

3.05°

TCH 45

RW06

6 NM

5.1 NM

2500

060° course

ONPIE

102° track

MKG

115.2

CATEGORY	A	B	C	D
LNNAV MDA	1100-1 477 (500-1)		1100-1½ 477(500-1½)	1100-1½ 477(500-1½)
CIRCLING	1100-1 472 (500-1)		1140-1½ 512(600-1½)	1180-2 552(600-2)

ELEV 628

D

685±

705

713

648

666

708

681

670±

6501 X 150

6100 X 150

060° to RW06

TDZE 623

060° to RW06

REIL Rwy 6 and 14

HIRL Rwy 6-24 and 14-32

EC-1.17 DEC 2009 to 14 JAN 2010

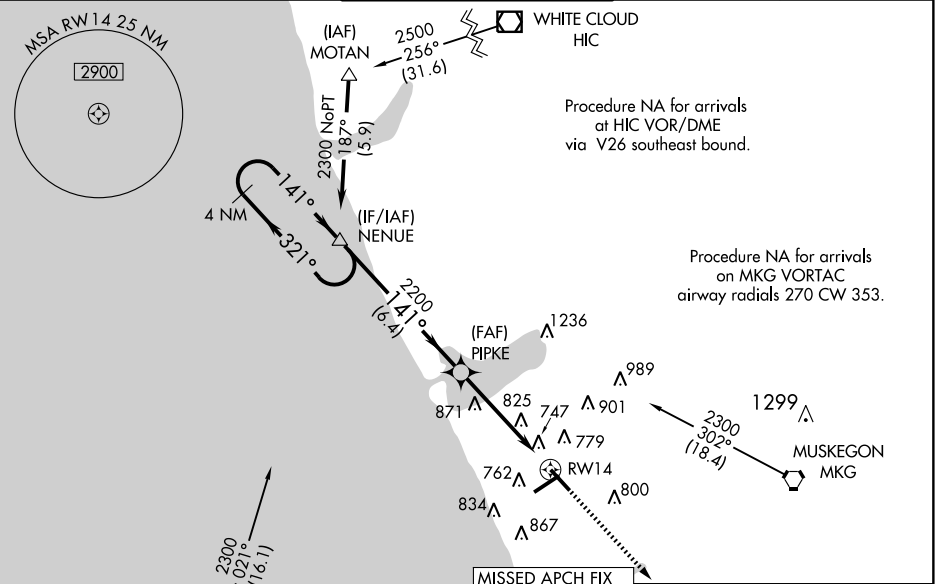
WAAS CH 69410 W14A	APP CRS 141°	Rwy Idg TDZE Apt Elev	6100 627 629
--	------------------------	-----------------------------	---

RNAV (GPS) RWY 14
MUSKEGON COUNTY (MKG)

Baro-VNAV NA when using Fremont altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Fremont altimeter setting and increase all DA 65 feet and all MDA 80 feet, increase LPV all Cats, LNAV/VNAV all Cats, LNAV Cats C and D, and Circling Cat C visibility ¼ mile. VDP NA when using Fremont altimeter setting.

MISSED APPROACH:
Climb to 2700 direct SINNI and hold.

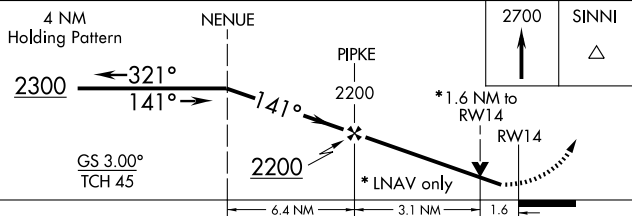
ATIS 124.3	MUSKEGON APP CON ★ 118.2 339.1 (N of V2) 119.8 339.1 (S of V2)	MUSKEGON TOWER ★ 126.25 (CTAF) 363.1	GND CON 121.6	UNICOM 122.95
----------------------	--	---	-------------------------	-------------------------



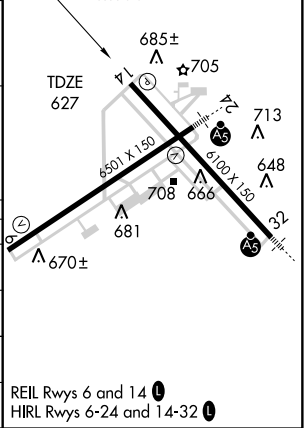
MISSED APCH FIX
ELEV 629 **D**
SINNI
4 NM
141°
322°

Procedure NA for arrivals at HIC VOR/DME via V26 southeast bound.

Procedure NA for arrivals on MKG VORTAC airway radials 270 CW 353.





CATEGORY	A	B	C	D
LPV DA	877-3/4 250 (300-3/4)			
LNAV/VNAV DA	1079-1 1/2 452 (500-1 1/2)			
LNAV MDA	1180-1 553 (600-1)	1180-1 1/2 553 (600-1 1/2)	1180-1 3/4 553 (600-1 3/4)	
CIRCLING	1180-1 551 (600-1)	1180-1 1/2 551 (600-1 1/2)	1180-2 551 (600-2)	



APP CRS 240°	Rwy Idg TDZE Apt Elev	6501 627 628
------------------------	-----------------------------	---

RNAV (GPS) RWY 24
MUSKEGON COUNTY (MKG)

 BARO-VNAV NA below -16°C (4°F).
 NA DME/DME RNP -0.3 NA.
 ASR

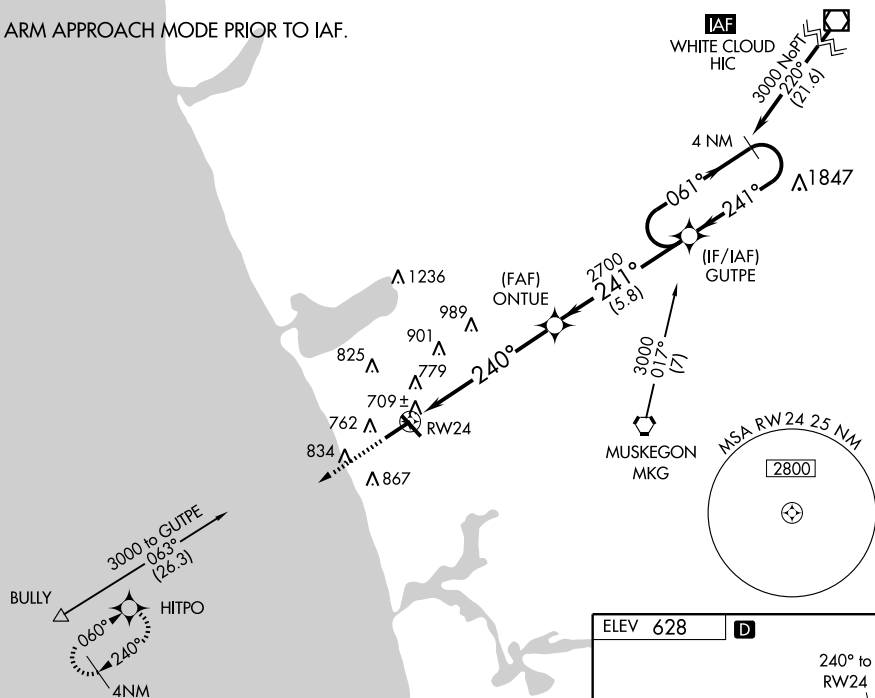
MALSR



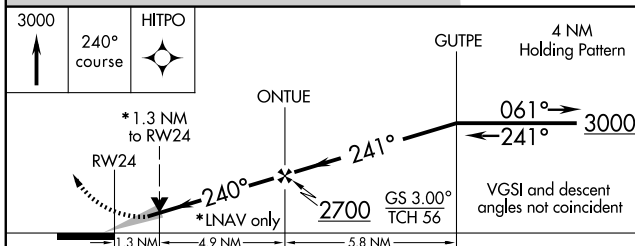
MISSED APPROACH: Climb to 3000
via 240° course to HITPO WP and hold.

ATIS	MUSKEGON APP CON ★	MUSKEGON TOWER ★	GND CON	UNICOM
124.3	118.2 339.1 (N of V2)	126.25 (CTAF) 0 363.1	121.6	122.95
	119.8 339.1 (S of V2)			

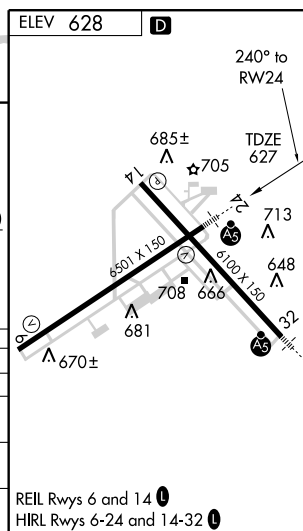
IAF ARM APPROACH MODE PRIOR TO IAF.



EC-1. 17 DEC 2009 to 14 JAN 2010



CATEGORY	A	B	C	D
GLS PA DA	NA			
LNAV/ VNAV DA	1080-1 453 (500-1)			
LNAV MDA	1100-½ 473 (500-½)		1100-¾ 473 (500-¾)	1100-1 473 (500-1)
CIRCLING	1100-1 ½ 472 (500-1½)		1140-1½ 512 (600-1½)	1180-2 552 (600-2)



WAAS CH 63010 W32A	APP CRS 321°	Rwy Idg 6100 TDZE 629 Apt Elev 629
--	------------------------	---

RNAV (GPS) RWY 32
MUSKEGON COUNTY (MKG)

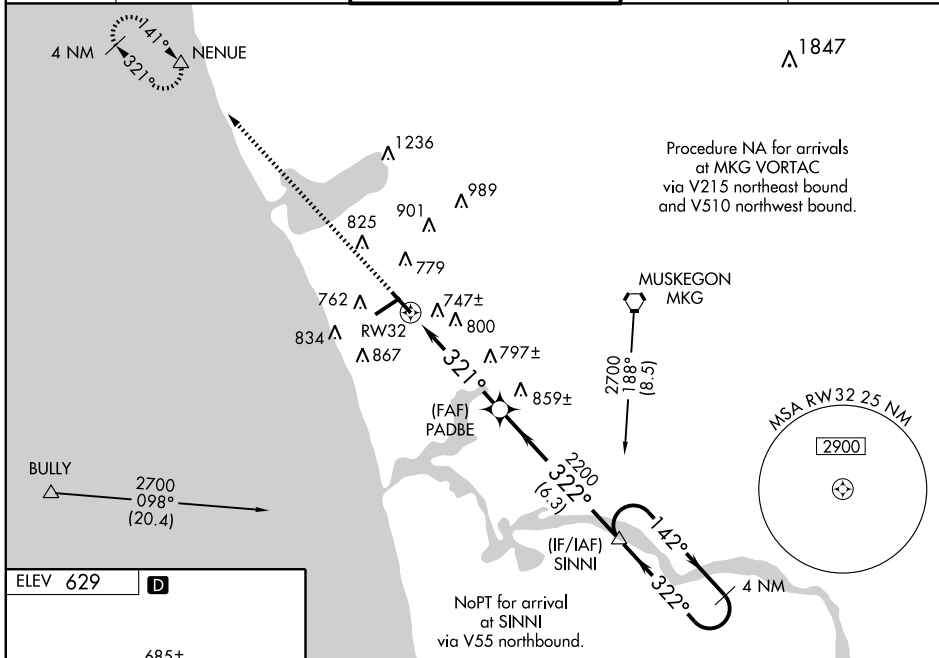
T For inoperative MALS/R, increase LPV all Cats visibility to RVR 5000. Baro-VNAV NA when using Fremont altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Fremont altimeter setting and increase all DA 65 feet, all MDA 80 feet, increase LPV all Cats visibility to RVR 4000, LNAV/VNAV all Cats visibility to RVR 6000, LNAV Cat C visibility to RVR 5000 and LNAV Cat D visibility to RVR 6000. VDP NA when using Fremont altimeter setting.

MALSR

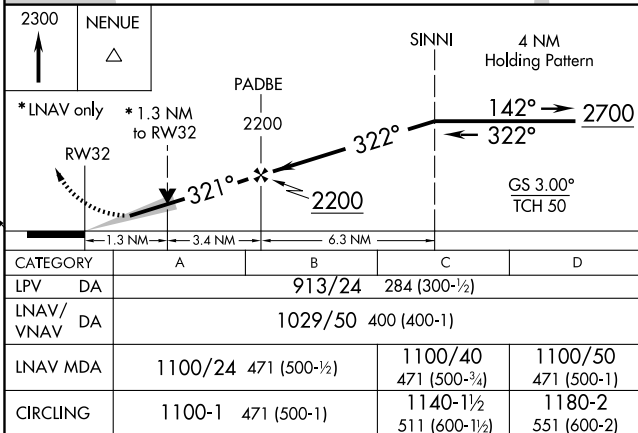
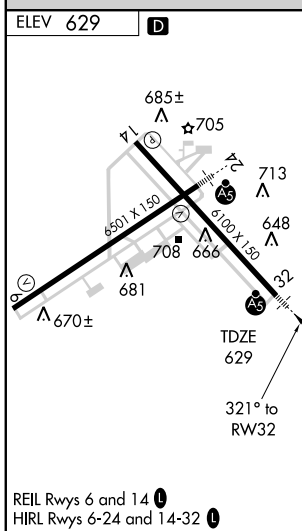


MISSED APPROACH:
Climb to 2300 direct
NENUE and hold.

ATIS 124.3	MUSKEGON APP CON ★ 118.2 339.1 (N of V2) 119.8 339.1 (S of V2)	MUSKEGON TOWER ★ 126.25 (CTAF) 0 363.1	GND CON 121.6	UNICOM 122.95
----------------------	--	--	-------------------------	-------------------------



EC-1. 17 DEC 2009 to 14 JAN 2010

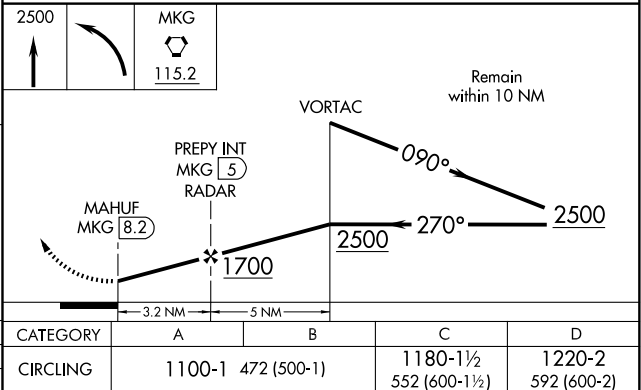
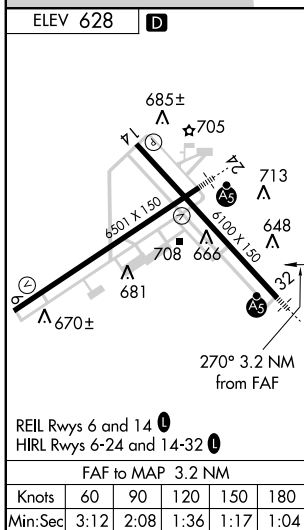
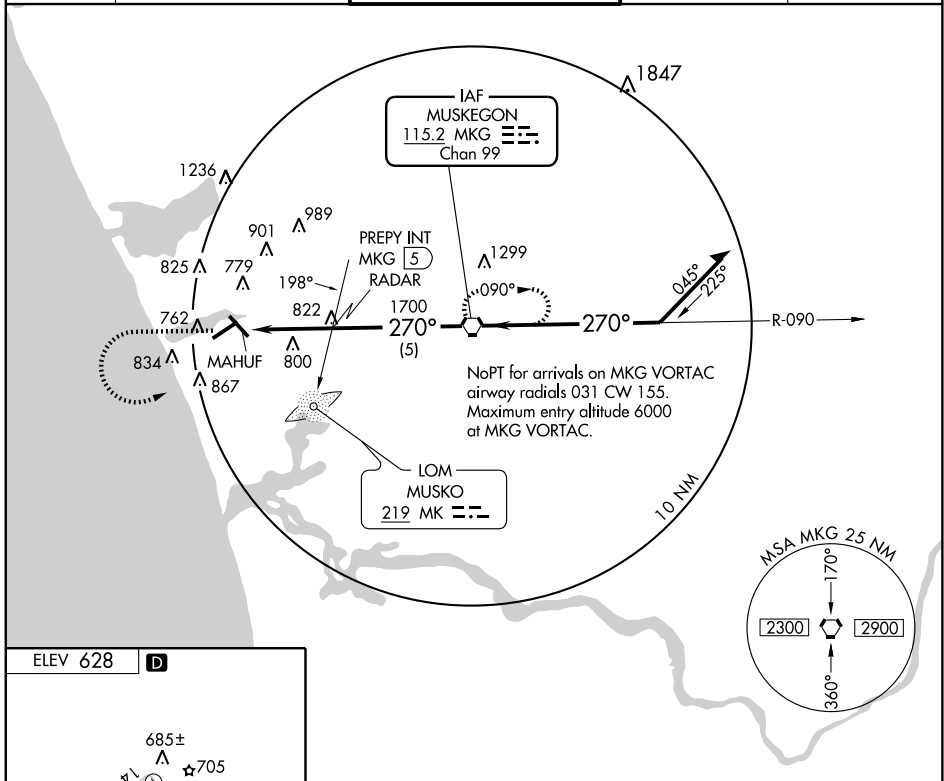


VORTAC MKG 115.2 Chan 99	APP CRS 270°	Rwy Idg TDZE Apt Elev	N/A N/A 628
--	------------------------	-----------------------------	--

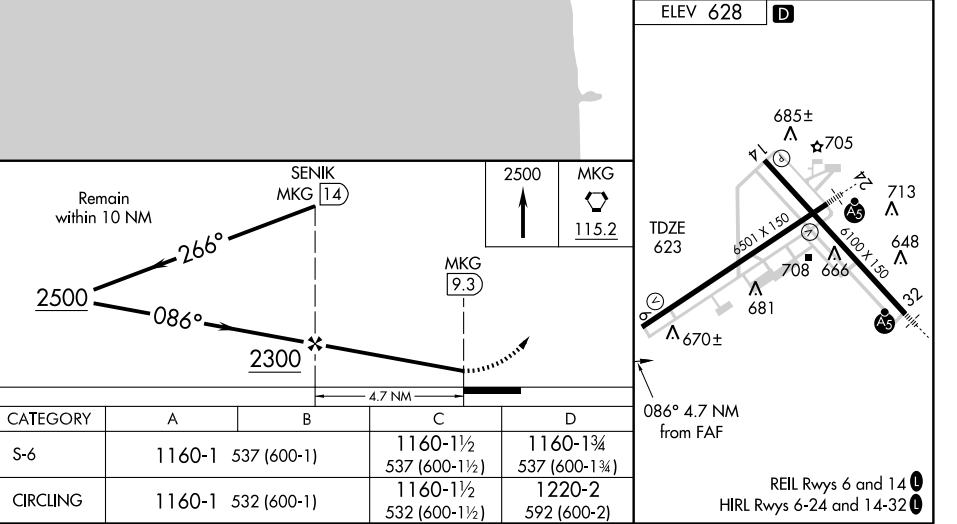
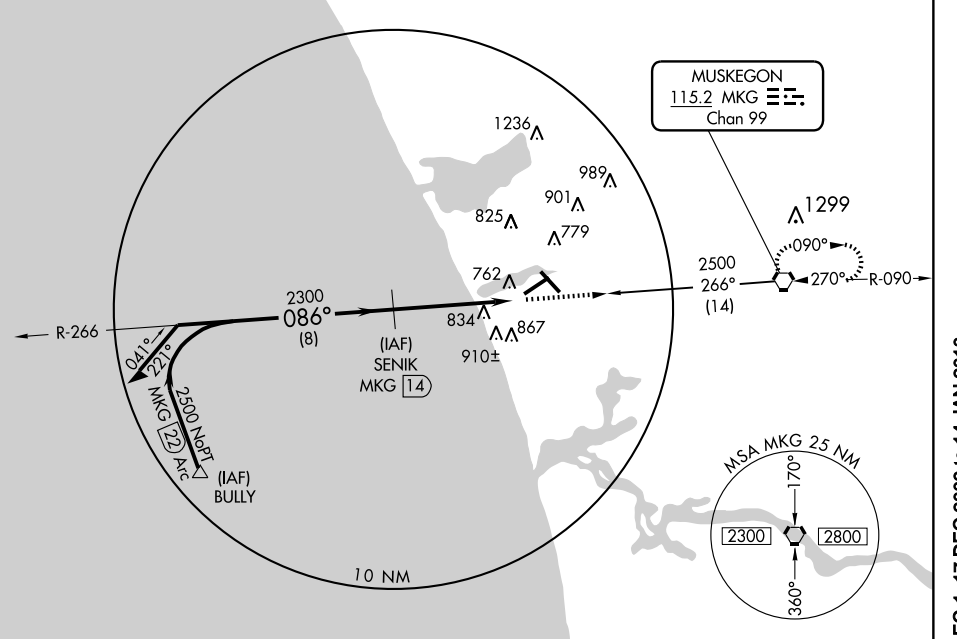
ADF, DME or RADAR REQUIRED.
If local altimeter setting not received, use Tulip City altimeter setting and increase all MDAs 80 feet.

MISSED APPROACH: Climb to 2500 then left turn direct MKG VORTAC and hold.

ATIS 124.3	MUSKEGON APP CON ★ 118.2 339.1 (N of V2) 119.8 339.1 (S of V2)	MUSKEGON TOWER ★ 126.25 (CTAF) 363.1	GND CON 121.6	UNICOM 122.95
----------------------	--	---	-------------------------	-------------------------



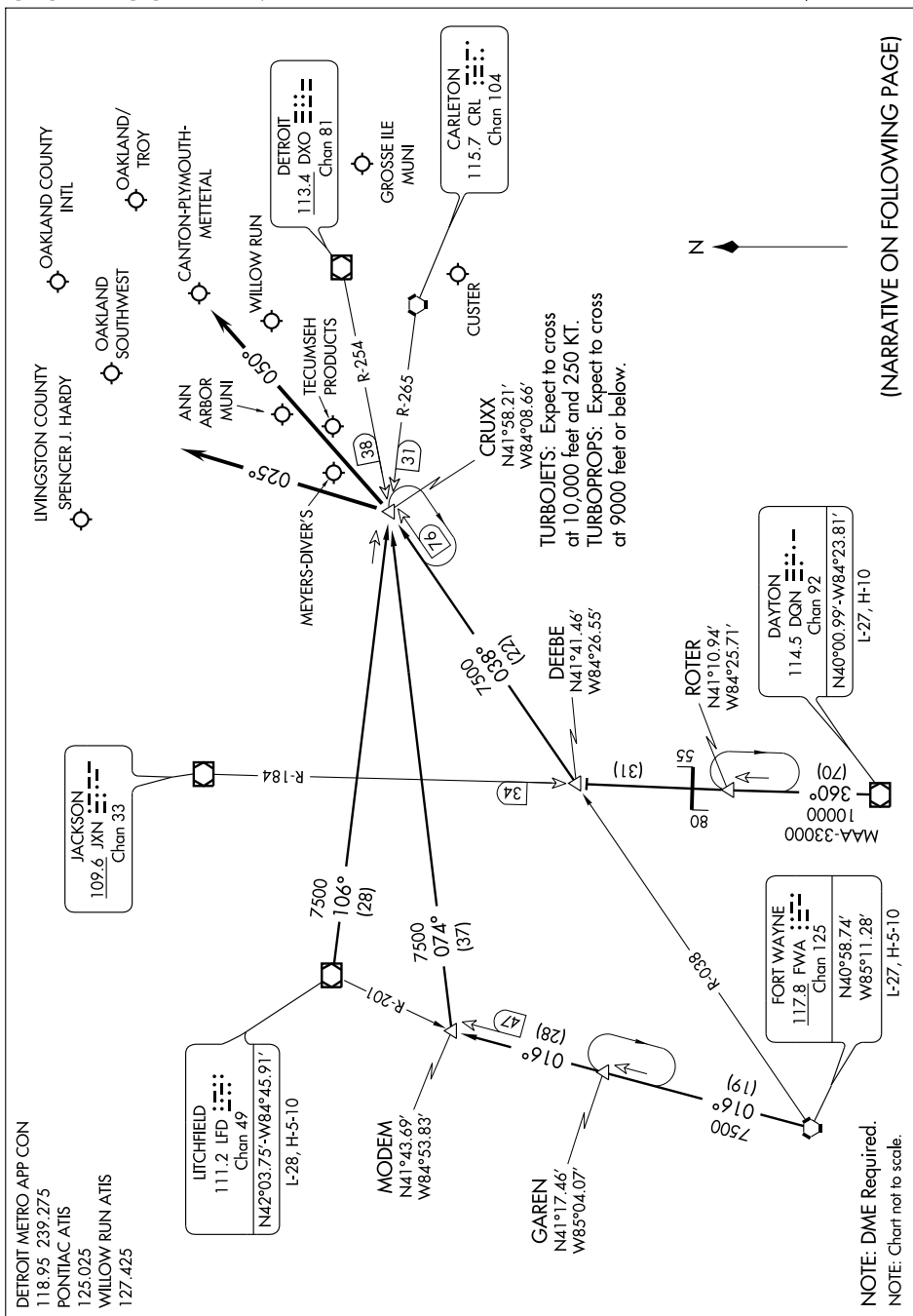
V ASR			MISSED APPROACH: Climb to 2500 direct MKG VORTAC and hold.		
ATIS 124.3	MUSKEGON APP CON ★ 118.2 339.1 (N of V2) 119.8 339.1 (S of V2)	MUSKEGON TOWER ★ 126.25 (CTAF) 363.1	GND CON 121.6	UNICOM 122.95	



EC-1.17 DEC 2009 to 14 JAN 2010

CRUXX FOUR ARRIVAL

DETROIT, MICHIGAN



ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUXX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUXX INT. Thence

FORT WAYNE TRANSITION (FWA.CRUXX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUXX INT. Thence

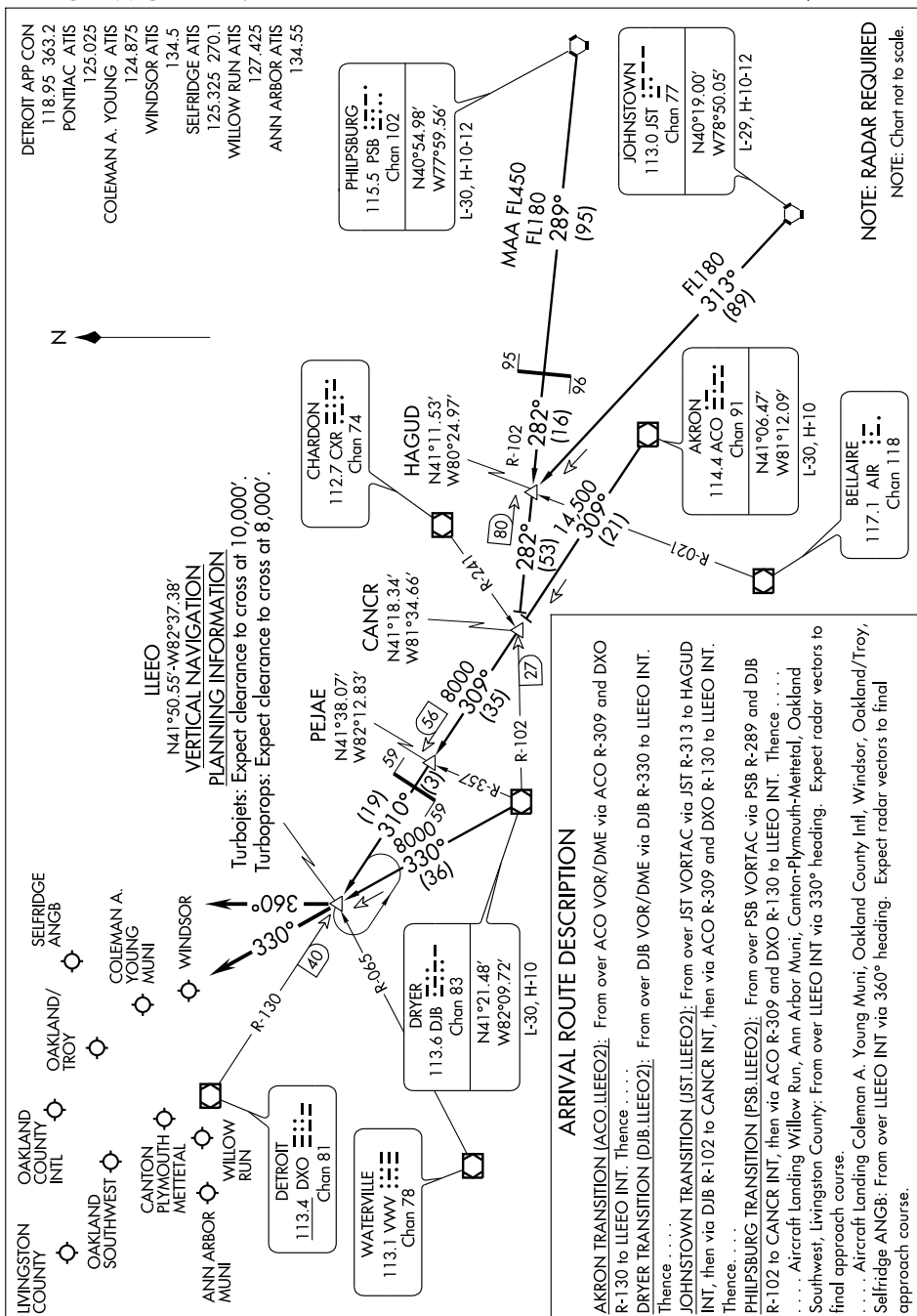
LITCHFIELD TRANSITION (LFD.CRUXX4): From over LFD VORTAC via LFD R-106 to CRUXX INT. Thence

. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUXX INT via 025° heading.

. . . . Aircraft landing YIP or ARB: From over CRUXX INT via 050° heading.
Expect radar vector to final approach course.

LEEO TWO ARRIVAL

DETROIT, MICHIGAN



SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON

127.5 239.275

WILLOW RUN ATIS 127.425

PONTIAC ATIS 125.025

COLEMAN A. YOUNG ATIS 124.875

WINDSOR ATIS 134.5

SELFREDGE ATIS 125.325 270.1

SPRTN

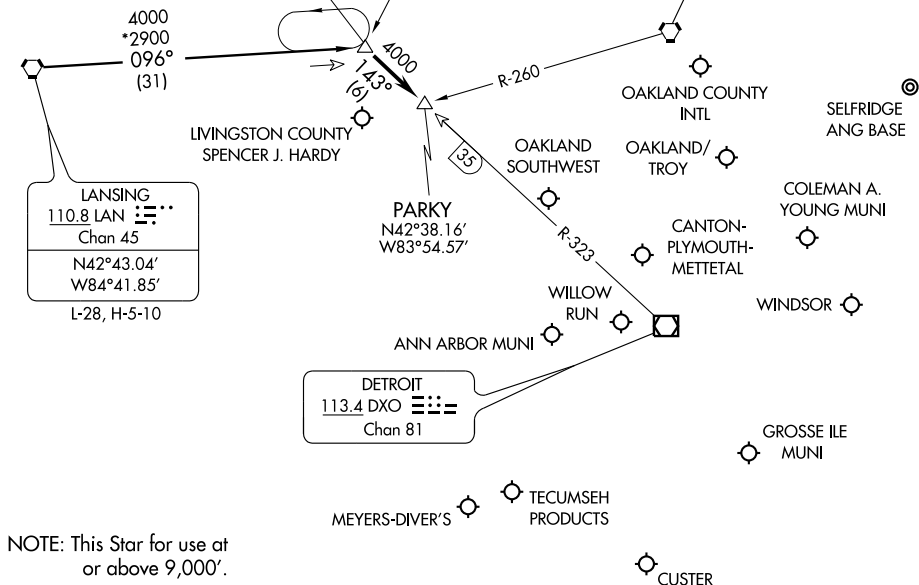
N42°42.52'-W84°00.23'

VERTICAL NAVIGATION

PLANNING INFORMATION

TURBOJETS/TURBOPROPS:

Expect clearance to cross at 9000'.



NOTE: This Star for use at or above 9,000'.

NOTE: Chart not to scale.

LANSGING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence

. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ,

1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence

. . . . Expect radar vectors to final approach course.

NOTE: RADAR Required.
NOTE: Chart not to scale.



ARRIVAL ROUTE DESCRIPTION

LONDON TRANSITION (YXU SWANN1): From over YXU VORTAC via YXU R-260 to PICES INT, then via PSI R-088 to SWWAN INT.
Thence . . . :

... From SWWAN, expect radar vectors to final approach course.

VORTAC SVM 114.3 Chan 90	APP CRS 350°	Rwy Idg TDZE Apt Elev	N/A N/A 926
--	------------------------	-----------------------------	--

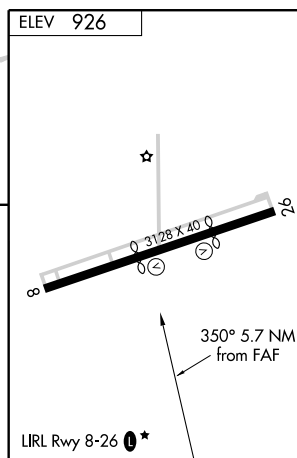
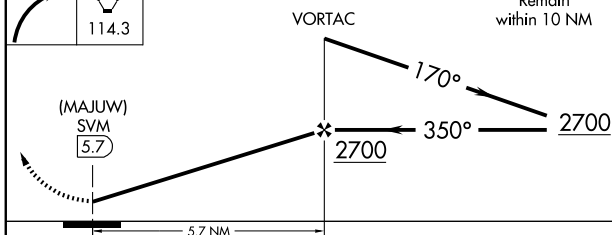
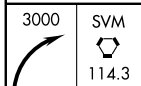
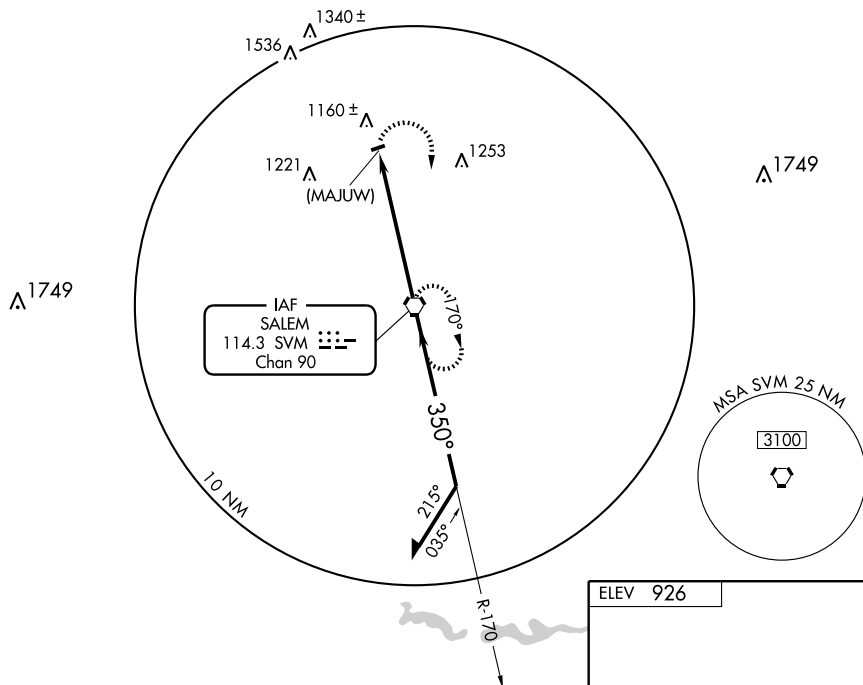
VOR or GPS-A
NEW HUDSON / OAKLAND SOUTHWEST (Y47)

T Use Detroit Willow Run airport altimeter setting.
A NA Night visibility minimums 2 miles.

MISSED APPROACH: Climbing right turn to 3000 direct SVM VORTAC and hold.

DETROIT APP CON
127.5 363.2

UNICOM
122.7 (CTAF) **L**★



CATEGORY	A	B	C	D	Knots	60	90	120	150	180
CIRCLING	1520-1	594 (600-1)	NA		Min:Sec	5:42	3:48	2:51	2:17	1:54

VOR/DME ERY 108.2 Chan 19	APP CRS 127°	Rwy Idg 4304 TDZE 871 Apt Elev 871
---	------------------------	---

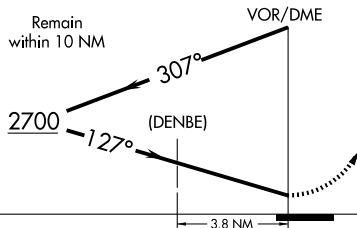
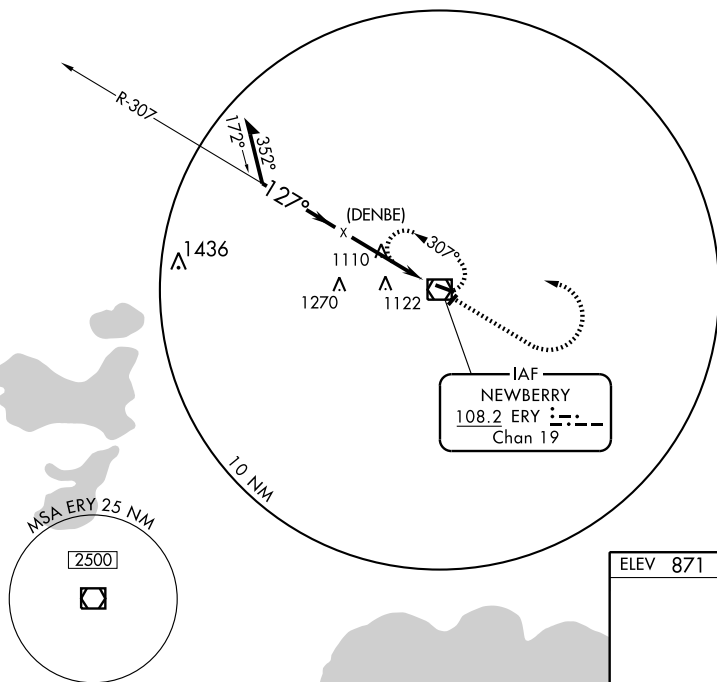
VOR or GPS RWY 11
NEWBERRY/LUCE COUNTY (ERY)

A NA

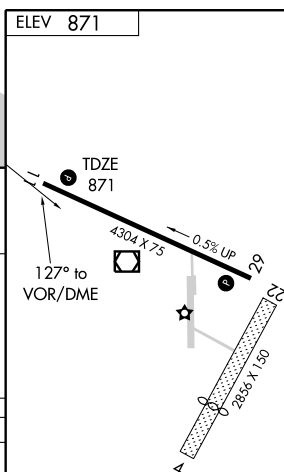
MISSED APPROACH: Climb to 2700 then left turn direct ERY VOR/DME and hold.

AWOS-3
108.2

GREEN BAY RADIO
122.4

UNICOM
122.8 (CTAF) **L**

CATEGORY	A	B	C	D
S-11	1480-1 609 (700-1)		1480-1 $\frac{3}{4}$ 609 (700-1 $\frac{3}{4}$)	1480-2 609 (700-2)
CIRCLING	1480-1 609 (700-1)		1480-1 $\frac{3}{4}$ 609 (700-1 $\frac{3}{4}$)	1480-2 609 (700-2)

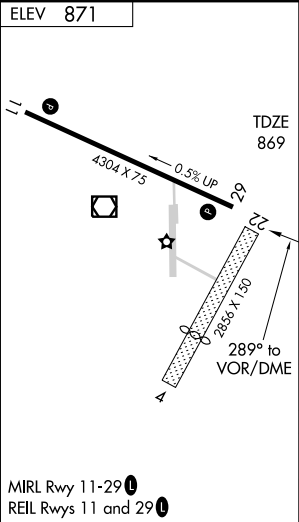
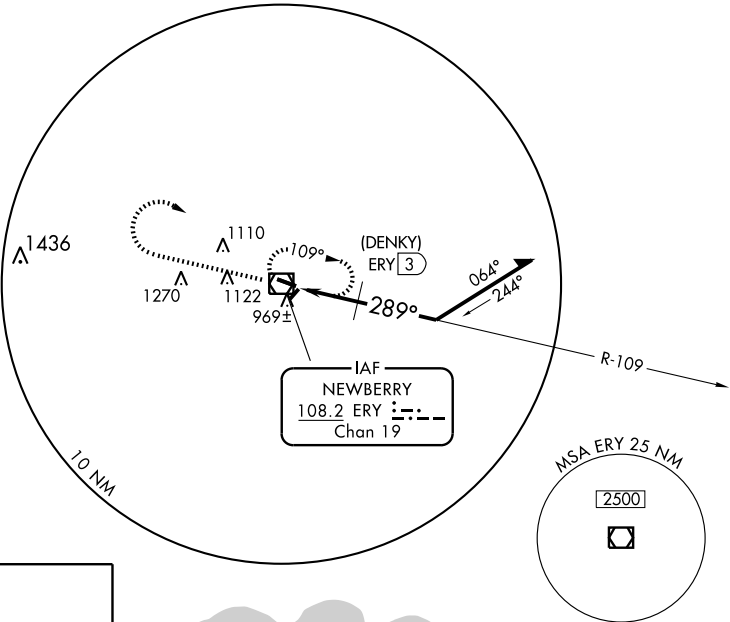




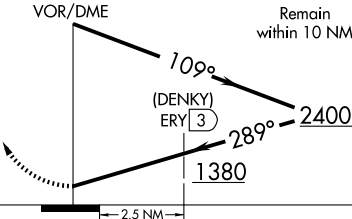
MIRL Rwy 11-29 **L**
REIL Rwy 11 and 29 **L**

VOR/DME ERY	APP CRS	Rwy Idg	4304
108.2	289°	TDZE	869
Chan 19		Apt Elev	871

VOR or GPS RWY 29
NEWBERRY/LUCE COUNTY (ERY)

▲ NA		MISSED APPROACH: Climb to 2400 then right turn direct ERY VOR/DME and hold.	
AWOS-3	GREEN BAY RADIO	UNICOM	
108.2	122.4	122.8 (CTAF) 0	



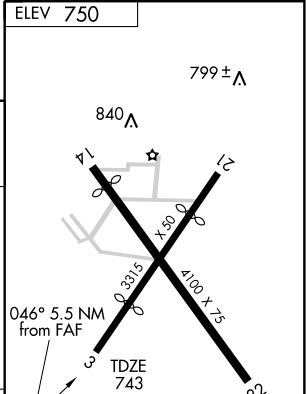
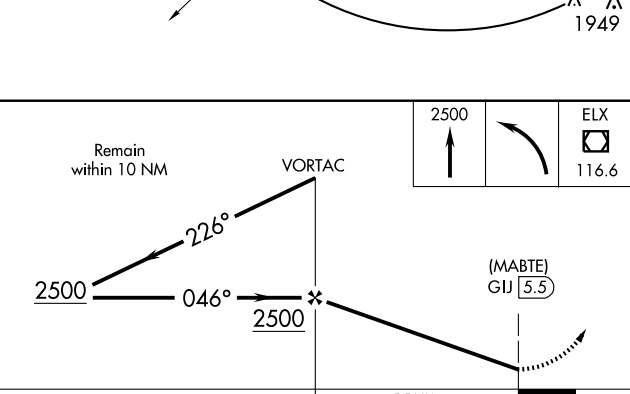
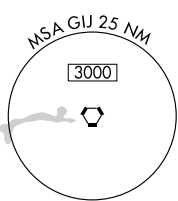
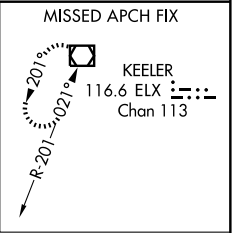
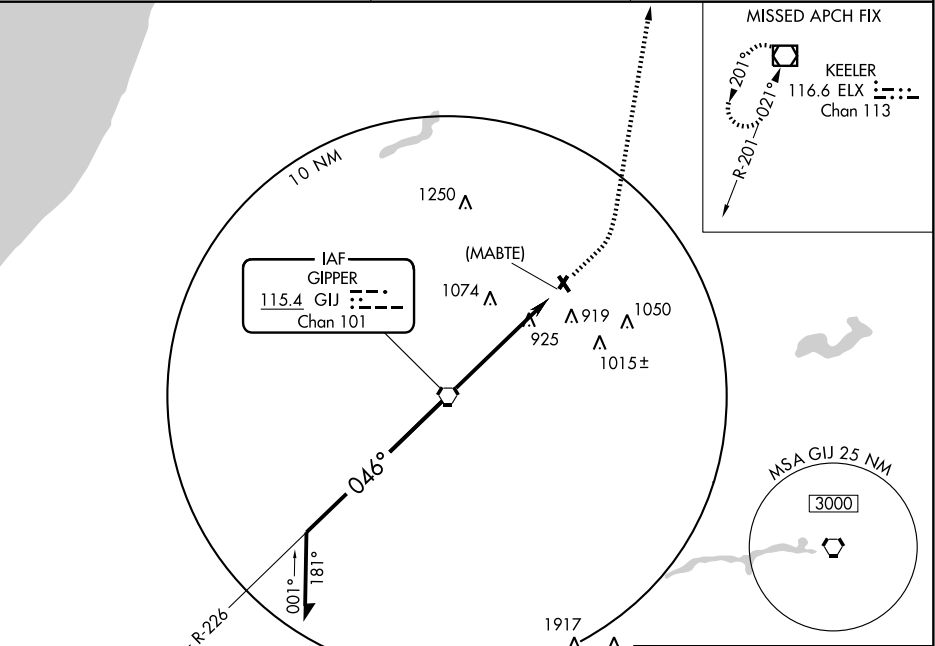
<div>2400</div> <div></div>		<div>ERY</div> <div></div> <div>108.2</div>	<div>VOR/DME</div> <div></div>	
CATEGORY	A	B	C	D
S-29	1380-1	511 (600-1)	1380-1½	511 (600-1½)
CIRCLING	1380-1	509 (600-1)	1380-1½ 509 (600-1½)	1480-2 609 (700-2)
DME MINIMUMS				
S-29	1220-1 351 (400-1)			1220-1¼ 351 (400-1¼)
CIRCLING	1280-1 409 (500-1)	1340-1 469 (500-1)	1340-1½ 469 (500-1½)	1480-2 609 (700-2)

VORTAC GJ	APP CRS	Rwy Idg	2415
115.4	046°	TDZE	743
Chan 101		Apt Elev	750

VOR or GPS RWY 3
NILES / JERRY TYLER MEMORIAL (3TR)

NA	Use South Bend altimeter setting. Straight-in minimums not authorized at night.	MISSED APPROACH: Climb to 2500, then left turn direct ELX VOR/DME and hold.
----	--	--

SOUTH BEND APP CON ★ 118.55 257.8	GCO 121.725	UNICOM 122.8 (CTAF) 0
--------------------------------------	----------------	--------------------------



CATEGORY	A	B	C	D
S-3	1200-1 457 (500-1)	1200-1½ 457 (500-1¼)	1200-1½ 457 (500-1½)	1200-1½ 457 (500-1½)
CIRCLING	1300-1 557 (600-1)	1300-1½ 557 (600-1½)	1460-2¼ 717 (800-2¼)	1460-2¼ 717 (800-2¼)

MIRL Rwy 14-32 0 REIL Rwy 14 and 32 0					
FAF to MAP 5.5 NM					
Knots	60	90	120	150	180
Min:Sec	5:30	3:40	2:45	2:12	1:50

VORTAC GJJ 115.4 Chan 101	APP CRS 225°	Rwy Idg 2565 TDZE 743 Apt Elev 750
---	------------------------	---

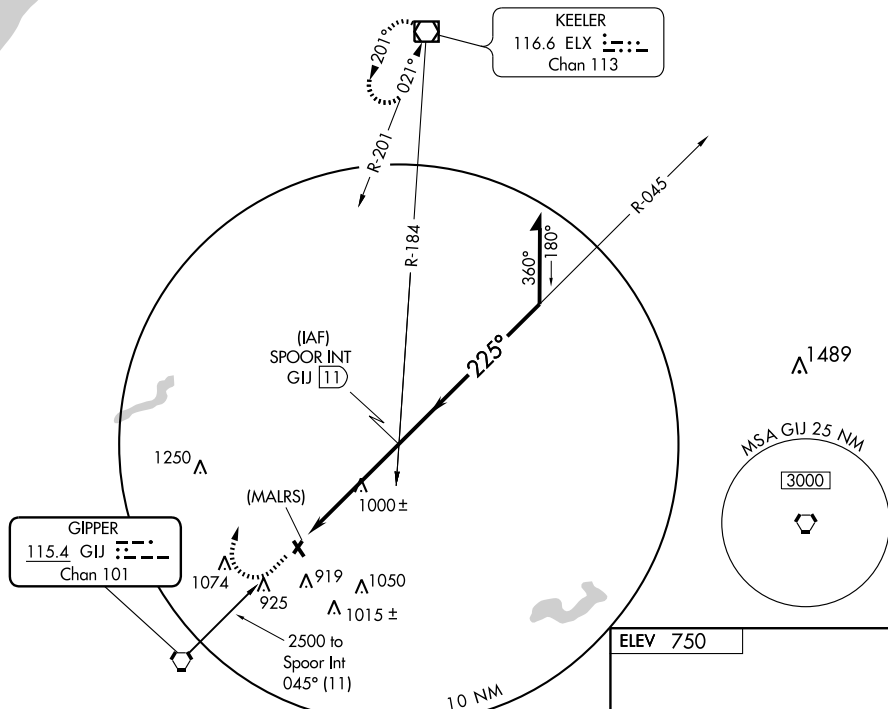
VOR or GPS RWY 21
NILES / JERRY TYLER MEMORIAL (3TR)




T Use South Bend altimeter setting.
A NA Straight-in minimums not authorized at night.

MISSED APPROACH: Climb to 1300, then climbing right turn to 2500 direct ELX VOR/DME and hold.

SOUTH BEND APP CON★
118.55 257.8

GCO
121,725

UNICOM
122.8 (CTAF) **L**

1300	2500	ELX
		
		116.6

SPOOR
GJJ 1

Remain
within 10 NM

(MALRS)
GII 6.1

A diagram showing a triangle with two sides of length 2500. The angle between these two sides is labeled 225°. One of the other angles is labeled 045°.

- 4.9 NM

1280-1 537 (600-1)

1280-1½
37 (600-1½)

1280-1 $\frac{3}{4}$
537 (600-1 $\frac{3}{4}$)

MIRL Rwy 14-32 **L**
REIL Rwy 14 and 32 **L**

FAF to MAP 4.9 NM

Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

NDB OGM 375	APP CRS 222°	Rwy Idg TDZE Apt Elev	N/A N/A 669
-----------------------	------------------------	-----------------------------	--------------------------

NDB or GPS-A

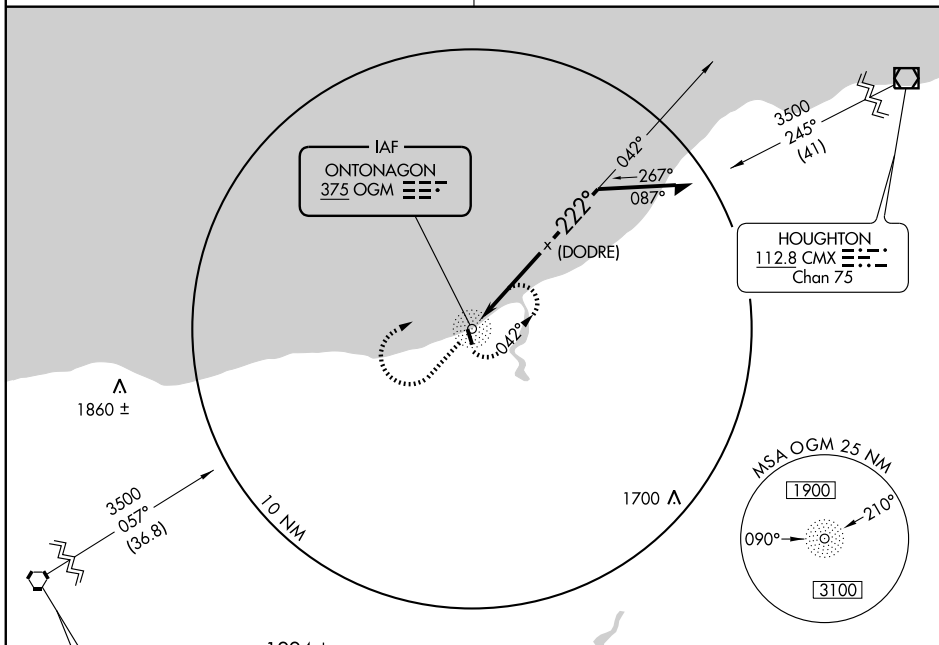
ONTONAGON COUNTY - SCHUSTER FIELD (OGM)

▼ Use Houghton altimeter setting, if not received
▲ NA procedure not authorized.

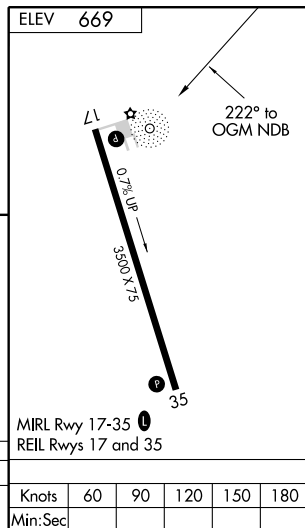
MISSED APPROACH: Climb to 2000, then climbing right turn to 3500 direct OGM NDB and hold.

MINNEAPOLIS CENTER
127.2 379.1

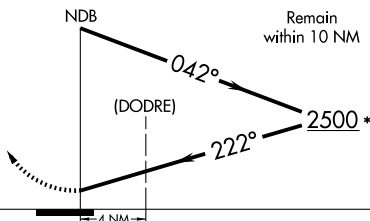
(CTAF)
122.9 0



IRONWOOD
 108.8 IWD
 Chan 25



2000	3500	OGM 375
------	------	------------



* Maintain 3500 until established outbound on procedure turn.

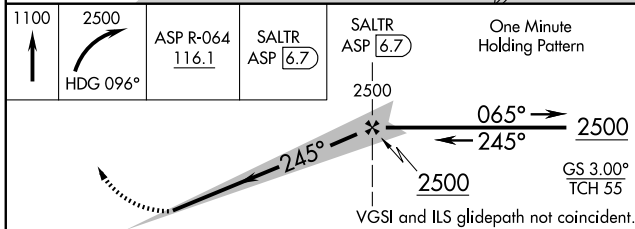
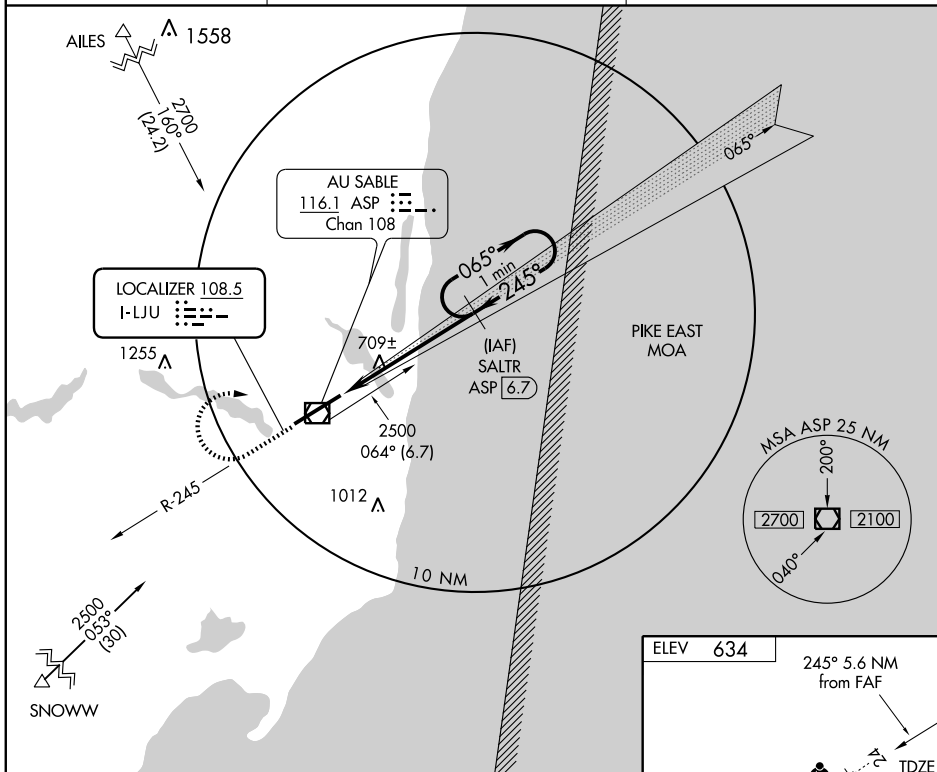
CATEGORY	A	B	C	D	Knots	60	90	120	150	180
CIRCLING	1420-1 751 (800-1)	1420-1¼ 751 (800-1¼)	1420-2¼ 751 (800-2¼)	NA	Min:Sec					

LOC I-LJU 108.5	APP CRS 245°	Rwy Idg 11,800 TDZE 624 Apt Elev 634
---------------------------	------------------------	---

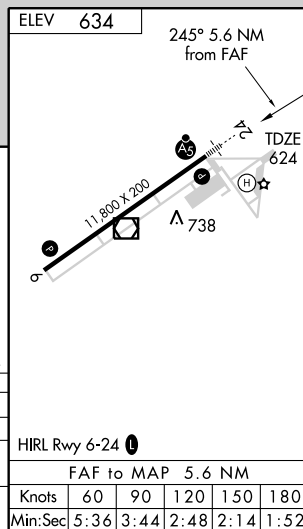
ILS or LOC/DME RWY 24 OSCODA-WURTSMITH (OSC)

<p>V NA</p> <p>Circling NA SouthEast of Rwy 6-24. DME from ASP VOR/DME. Simultaneous reception of I-LJU and ASP DME required. For inoperative MALSR, increase S-LOC 24 Cat D visibility to 1.</p>	<p>MALSR AS</p> <p>MISSED APPROACH: Climb to 1100 then climbing right turn to 2500 via heading 096° and ASP R-064 to SALTR and hold.</p>
---	---

AWOS-3 116.1	MINNEAPOLIS CENTER 118.525 251.15	UNICOM 123.0 (CTAF) 0
------------------------	---	---------------------------------



CATEGORY	A	B	C	D
S-ILS 24	824-1/2 200 (200-1/2)			
S-LOC 24	960-1/2 336 (400-1/2)		960-3/4 336 (400-3/4)	
CIRCLING	1140-1 506 (600-1)		1140-1 1/2 506 (600-1 1/2)	



APP CRS	Rwy Idg	11,800
065°	TDZE	634
	Apt Elev	634

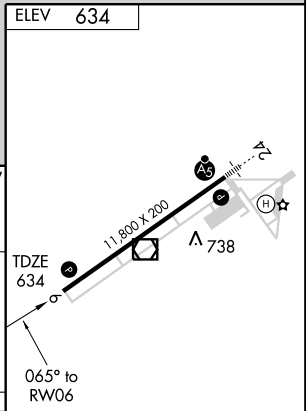
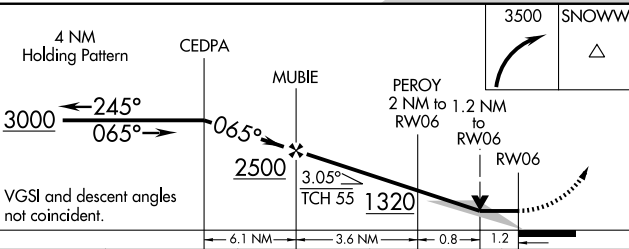
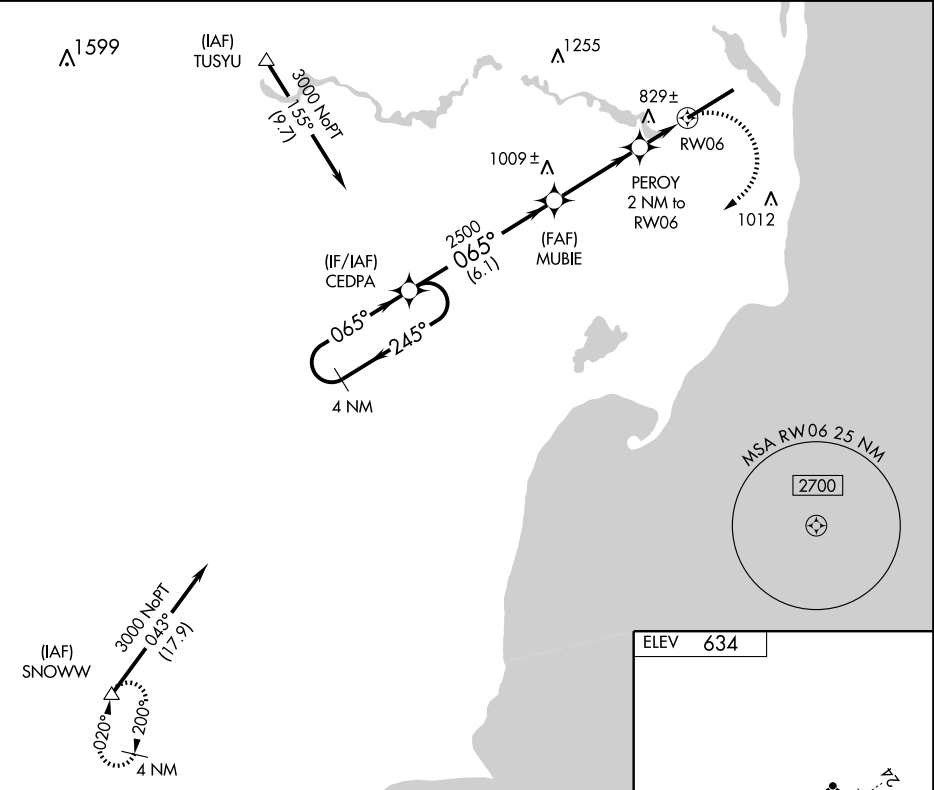
RNAV (GPS) RWY 6

OSCODA-WURTSMITH (OSC)

⚠ Circling NA southeast of Rwy 6-24. DME/DME RNP-0.3 NA. VDP NA when using Alpena altimeter setting. When local altimeter setting not received, use Alpena altimeter setting and increase all MDAs 100 feet, increase visibility for LNAV Cats C and D and Circling Cat C ¼ mile.

MISSED APPROACH: Climbing right turn to 3500 direct SNOWW and hold.

AWOS-3 116.1	MINNEAPOLIS CENTER 118.525 251.15	UNICOM 123.0 (CTAF) 📻
-----------------	--------------------------------------	---------------------------------



CATEGORY	A	B	C	D
LNAV MDA	1080-1	446 (500-1)	1080-1¼ 446 (500-1¼)	1080-1½ 446 (500-1½)
CIRCLING	1140-1	506 (600-1)	1140-1½ 506 (600-1½)	1200-2 566 (600-2)

HIRL Rwy 6-24 **📻**

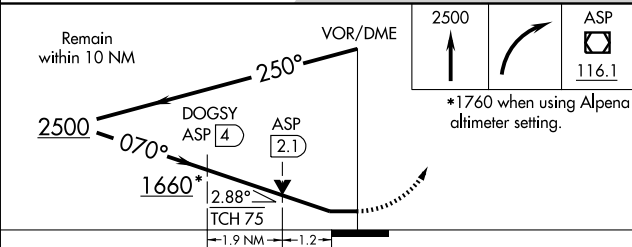
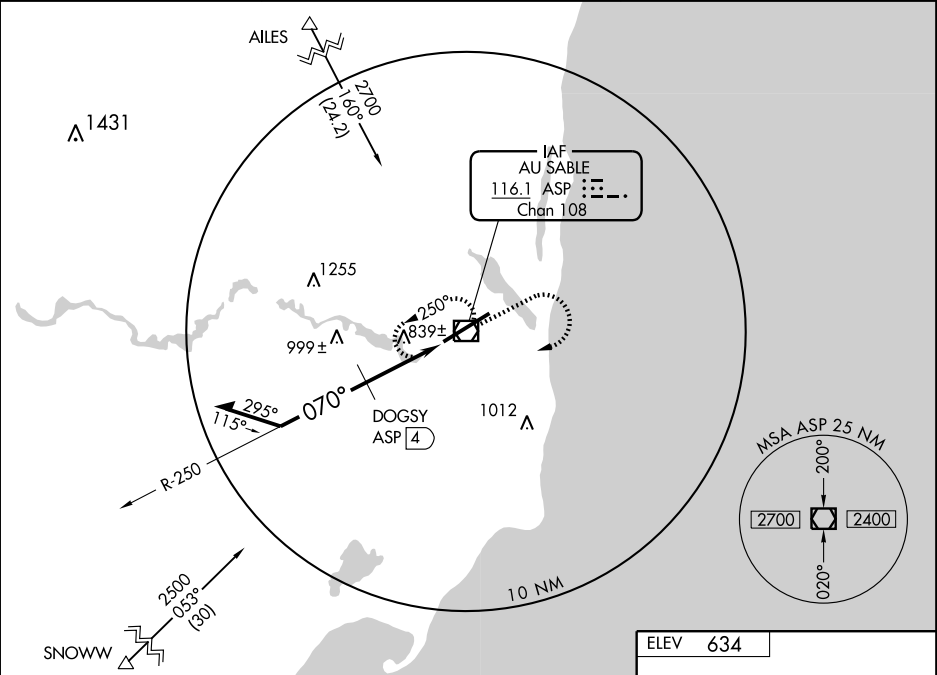
VOR/DME ASP 116.1 Chan 108	APP CRS 070°	Rwy Idg 11,800 TDZE 634 Apt Elev 634
--	------------------------	---

VOR RWY 6
OSCODA-WURTSMITH (OSC)

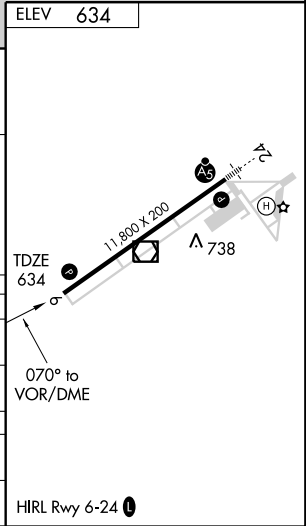
NA Circling NA southeast of Rwy 6 and 24. VDP NA when using Alpena altimeter setting. When local altimeter setting not received, use Alpena altimeter setting and increase all MDAs 100 feet and DOGSY Fix minimums visibility S-6/Circling Cat C ¼ mile, S-6 Cat D ¼ mile.

MISSED APPROACH: Climb to 2500 then right turn direct ASP VOR/DME and hold.

AWOS-3 116.1	MINNEAPOLIS CENTER 118.525 251.15	UNICOM 123.0 (CTAF) 0
------------------------	---	--



CATEGORY	A	B	C	D
S-6	1660-1¼ 1026 (1100-1¼)	1660-1½ 1026 (1100-1½)	1660-3	1026 (1100-3)
CIRCLING	1660-1¼ 1026 (1100-1¼)	1660-1½ 1026 (1100-1½)	1660-3	1026 (1100-3)
DOGSY FIX MINIMUMS				
S-6	1100-1	466 (500-1)	1100-1¼ 466 (500-1¼)	1100-1½ 466 (500-1½)
CIRCLING	1140-1	506 (600-1)	1140-1½ 506 (600-1½)	1200-2 566 (600-2)



WAAS CH 50209 W10A	APP CRS 109°	Rwy Idg 4300 TDZE 736 Apt Elev 736
--	------------------------	---

RNAV (GPS) RWY 10

OWOSSO COMMUNITY (RNP)

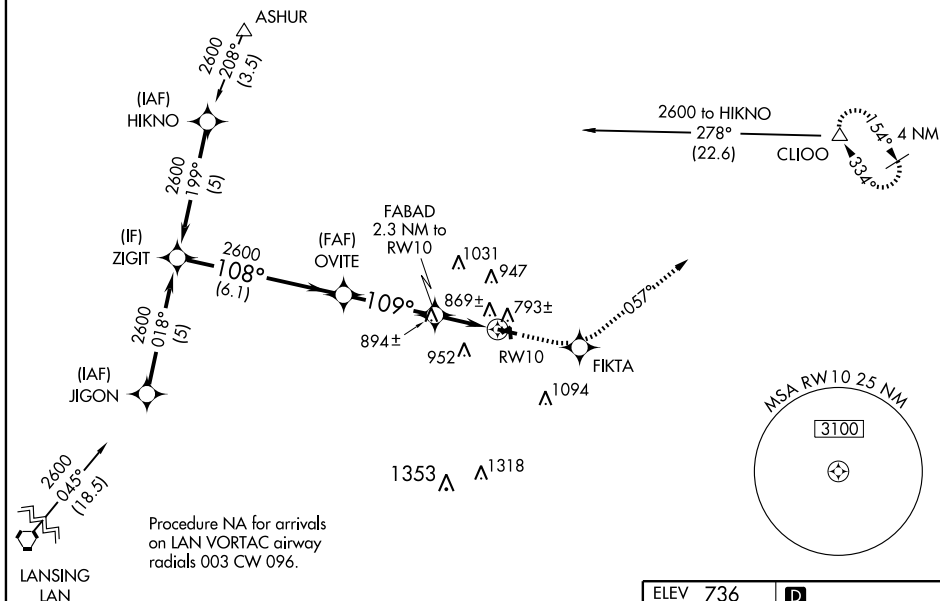


Circling to Rwy 6-24 and 18-36 NA. When local altimeter setting not received, use Flint altimeter setting and increase all DA 47 feet and LPV visibility $\frac{1}{4}$ mile all Cots, increase all MDA 60 feet and LNAV Cat C visibility $\frac{1}{4}$ mile. Baro-VNAV NA when using Flint altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 3000 direct FIKTA and via 057° track to CLIOO and hold.

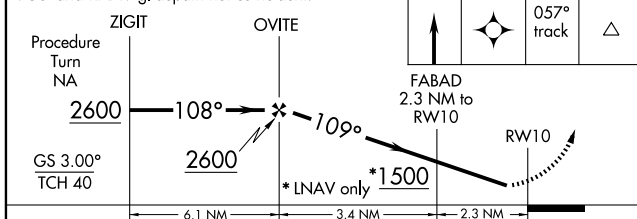
AWOS-3
118.025

FLINT APP CON
118.8 257.9

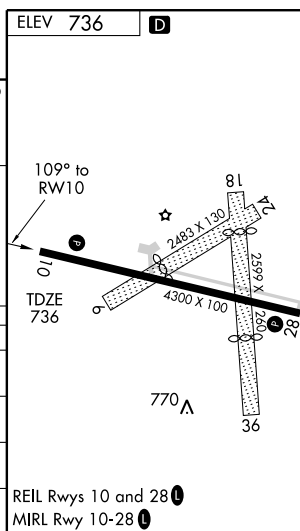
UNICOM
123.0 (CTAF) **L**

EC-1. 17 DEC 2009 to 14 JAN 2010

VGSI and RNAV glidepath not coincident.



CATEGORY		A	B	C	D
LPV	DA	1079-1¼ 343 (400-1¼)			NA
LNAV/ VNAV	DA	1258-2 522 (600-2)			NA
LNAV	MDA	1180-1 444 (500-1)	1180-1¼ 444 (500-1¼)		NA
CIRCLING		1240-1 504 (600-1)	1260-1½ 524 (600-1½)		NA



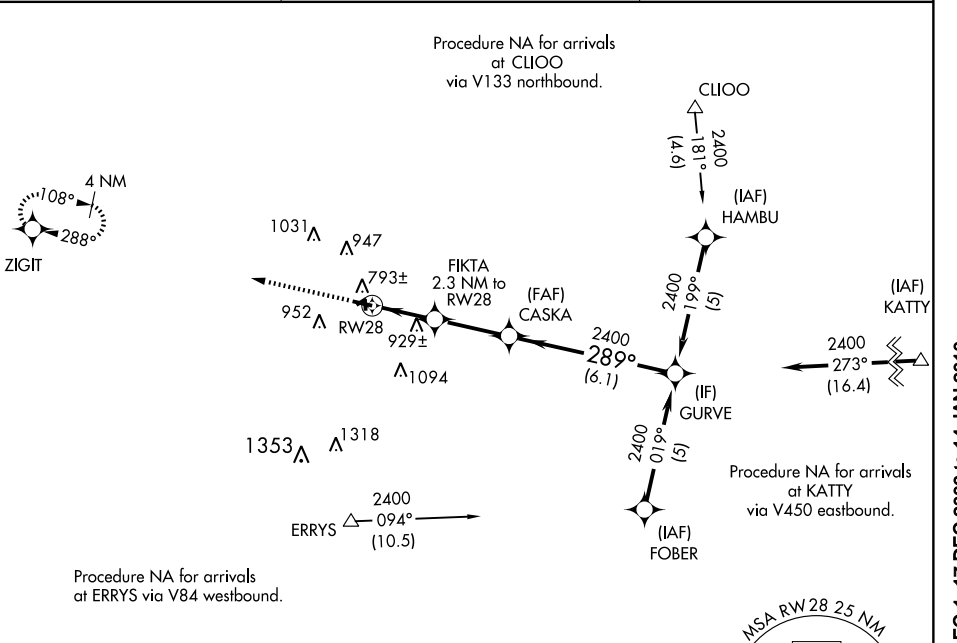
▼

▲

Circling to Rwy 6-24 and 18-36 NA. When local altimeter setting not received, use Flint altimeter setting and increase all MDA 60 feet and LNAV Cat C visibility ¼ mile. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 2600 direct ZIGIT and hold.

AWOS-3 118.025	FLINT APP CON 118.8 257.9	UNICOM 123.0 (CTAF) 1
-------------------	------------------------------	---------------------------------



2600 ZIGIT VGSI and descent angles not coincident.				
CATEGORY	A	B	C	D
LNAV MDA	1180-1	444 (500-1)	1180-1¼ 444 (500-1¼)	NA
CIRCLING	1240-1	504 (600-1)	1260-1½ 524 (600-1½)	NA

REIL Rwy 10 and 28 **1**
MIRL Rwy 10-28 **1**

VORTAC FNT 116.9 Chan 116	APP CRS 281°	Rwy Idg 4300 TDZE 736 Apt Elev 736
---	------------------------	---

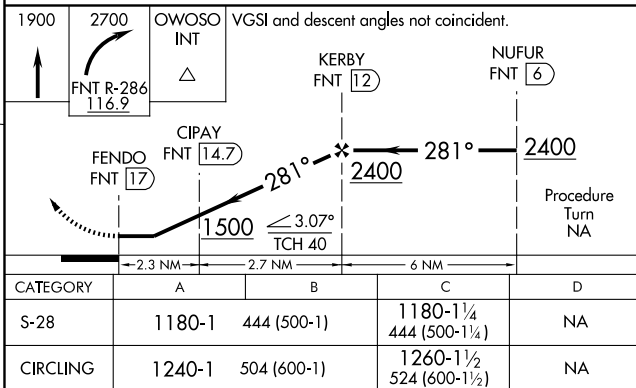
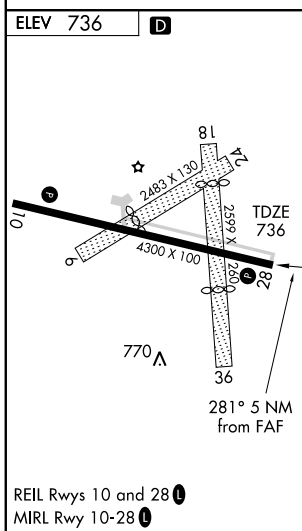
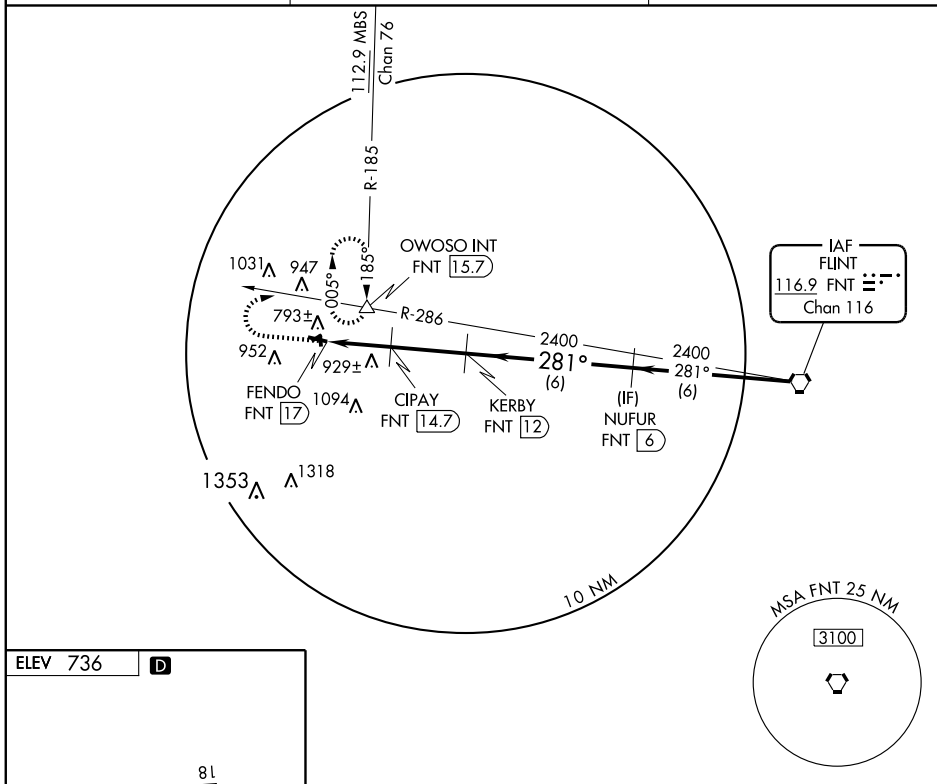
VOR/DME RWY 28

OWOSSO COMMUNITY (RNP)

▼ Circling to Rwy 6-24 and 18-36 NA. When local altimeter setting not received, use Flint altimeter setting and increase all MDA 60 feet and S-28 Cat C visibility ¼ mile. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 1900 then climbing right turn to 2700 via FNT VORTAC R-286 to OWOSSO INT and hold.

AWOS-3 118.025	FLINT APP CON 118.8 257.9	UNICOM 123.0 (CTAF) 1
--------------------------	-------------------------------------	--



LOC I-PLN	APP CRS	Rwy Idg	6512
<u>111.3</u>	321°	TDZE	712
		Apt Elev	721

ILS or LOC RWY 32

PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)

T When local altimeter setting not received, use Harbor Springs altimeter setting and increase DA 28 feet, and all MDA 40 feet, increase S-LOC 32 Cat D and EMHUR fix minimums S-LOC 32 Cat C visibilities ¼ mile.

MALSR

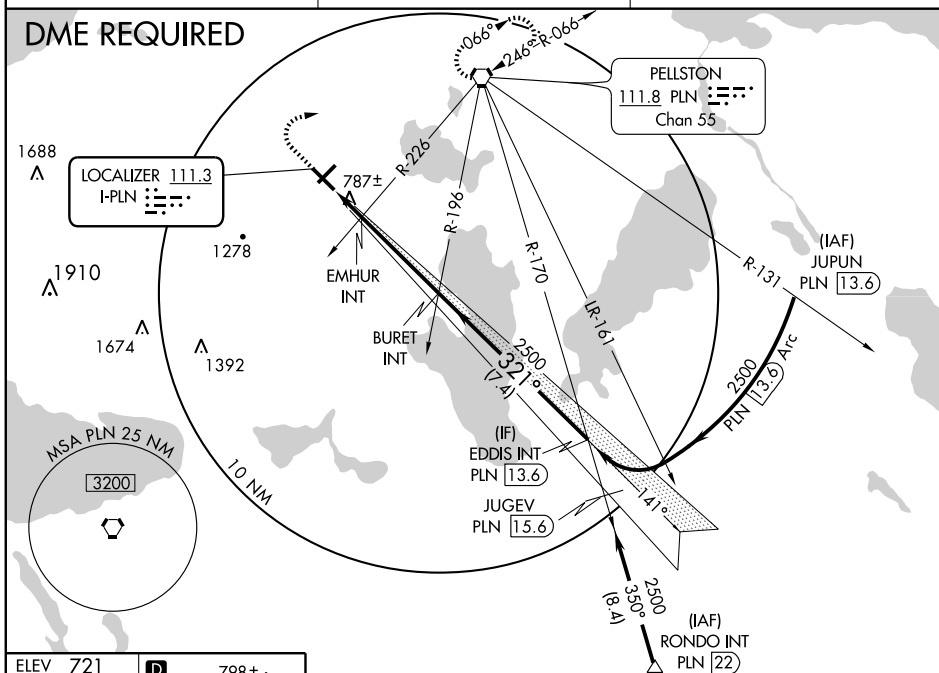
MISSED APPROACH: Climb to 1400 then climbing right turn to 2600 direct PLN VORTAC and hold.

ASOS
119.025

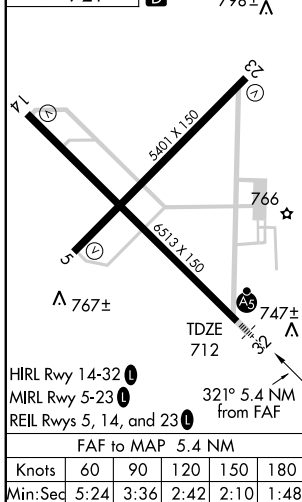
MINNEAPOLIS CENTER
134.6 354.05




UN|COM
123.0 (CTAF) **L**

DME REQUIRED

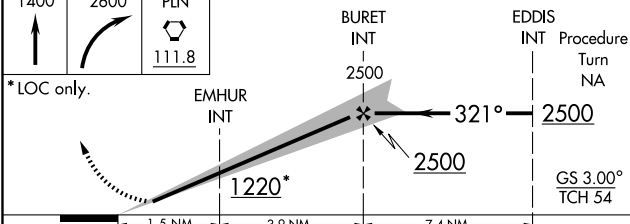


ELEV 721	D 798±A
----------	----------------



1400	2600	PLN
		
		<u>111.8</u>

* LOC only.



CATEGORY	A	B	C	D
S-ILS 32	912- $\frac{1}{2}$ 200 (200- $\frac{1}{2}$)			
S-LOC 32	1220- $\frac{1}{2}$ 508 (500- $\frac{1}{2}$)		1220-1 508 (500-1)	
CIRCLING	1260-1 539 (600-1)	1280-1 559 (600-1)	1280-1 $\frac{1}{2}$ 559 (600-1 $\frac{1}{2}$)	1420-2 $\frac{1}{4}$ 699 (700-2 $\frac{1}{4}$)
EMHUR FIX MINIMUMS				
S-LOC 32	1080- $\frac{1}{2}$ 368 (400- $\frac{1}{2}$)			1080- $\frac{3}{4}$ 368 (400- $\frac{3}{4}$)
CIRCLING	1260-1 539 (600-1)	1280-1 559 (600-1)	1280-1 $\frac{1}{2}$ 559 (600-1 $\frac{1}{2}$)	1420-2 $\frac{1}{4}$ 699 (700-2 $\frac{1}{4}$)

APP CRS	Rwy Idg	5395
051°	TDZE	716
	Apt Elev	721

RNAV (GPS) RWY 5

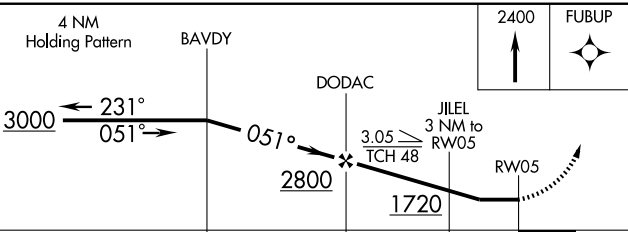
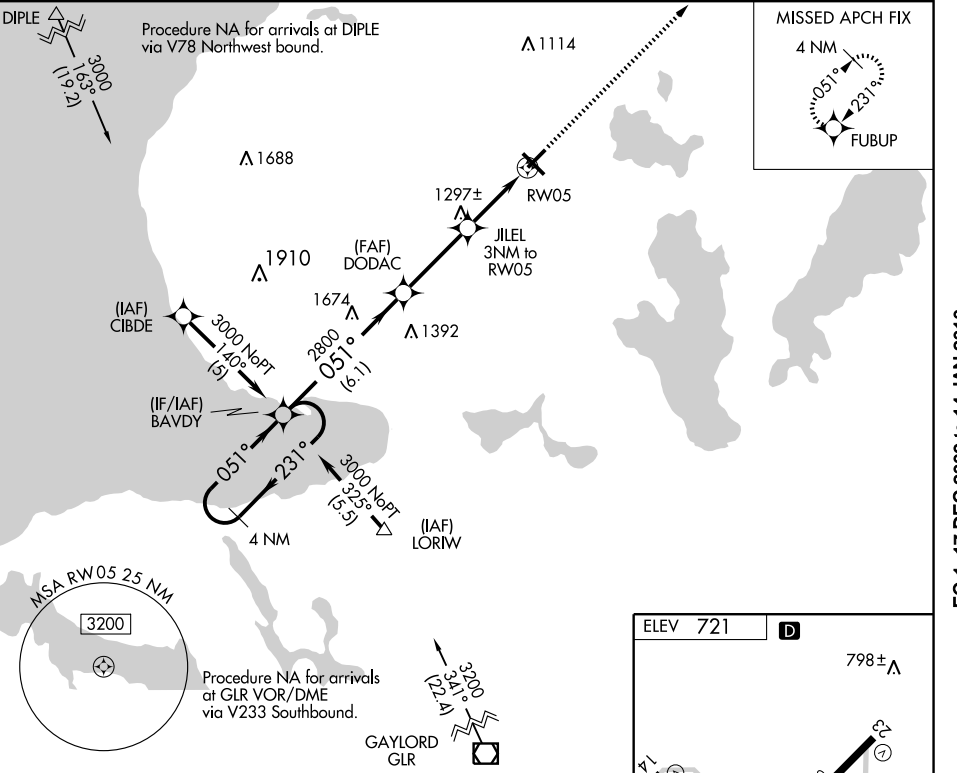
PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)

▼ DME/DME RNP-0.3 NA. Visibility reductions by helicopters NA.

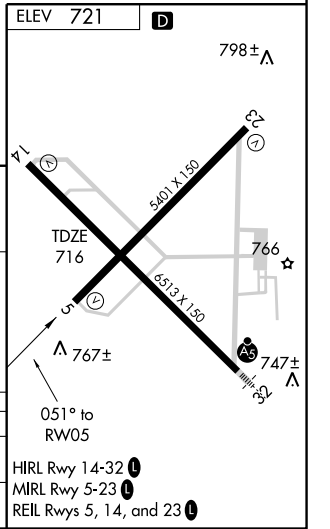
▲ When local altimeter setting not received, use Harbor Springs altimeter setting and increase all MDA 40 feet, increase LNAV Cat. A/C/D visibilities ¼ mile.

MISSED APPROACH: Climb to 2400 direct FUBUP and hold.

ASOS 119.025	MINNEAPOLIS CENTER 134.6 354.05	UNICOM 123.0 (CTAF) 0
-----------------	------------------------------------	---------------------------------



CATEGORY	A	B	C	D
LNAV MDA	1560-1 844 (900-1)	1560-1¼ 844 (900-1¼)	1560-2½ 844 (900-2½)	1560-2¾ 844 (900-2¾)
CIRCLING	1560-1 839 (900-1)	1560-1¼ 839 (900-1¼)	1560-2½ 839 (900-2½)	1560-2¾ 839 (900-2¾)



WAAS CH 81915 W23A	APP CRS 231°	Rwy Idg 5395 TDZE 721 Apt Elev 721
--	------------------------	---

RNAV (GPS) RWY 23

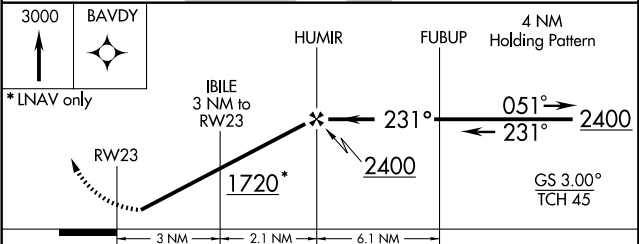
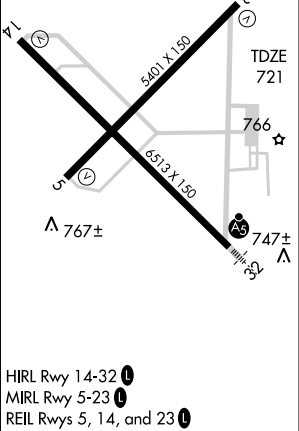
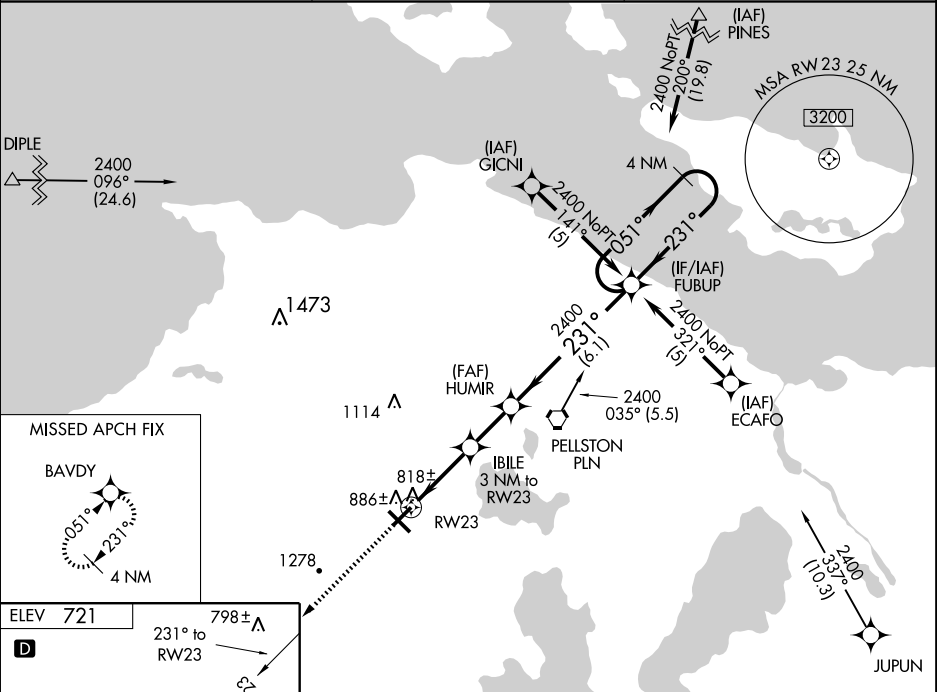
PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)

▼ Baro-VNAV NA when using Harbor Springs altimeter setting.

▲ For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Harbor Springs altimeter setting and increase all DA 28 feet, all MDA 40 feet, increase LNAV/VNAV all Cats visibility ¼ mile.

MISSED APPROACH: Climb to 3000 direct BAVDY and hold.

ASOS 119.025	MINNEAPOLIS CENTER 134.6 354.05	UNICOM 123.0 (CTAF) 0
------------------------	---	---------------------------------



CATEGORY	A	B	C	D
LPV DA	1057-1¼		336 (400-1¼)	
LNAV/VNAV DA	1109-1¼		338 (400-1¼)	
LNAV MDA	1240-1	519 (600-1)	1240-1½ 519 (600-1½)	1240-1¾ 519 (600-1¾)
CIRCLING	1260-1 539 (600-1)	1280-1 559 (600-1)	1280-1½ 559 (600-1½)	1420-2¼ 699 (700-2¼)

HIRL Rwy 14-32 0
MIRL Rwy 5-23 0
REIL Rws 5, 14, and 23 0

WAAS CH 77813 W32A	APP CRS 321°	Rwy Idg TDZE 712 Apt Elev 721	6512
--	------------------------	---	-------------

RNAV (GPS) RWY 32

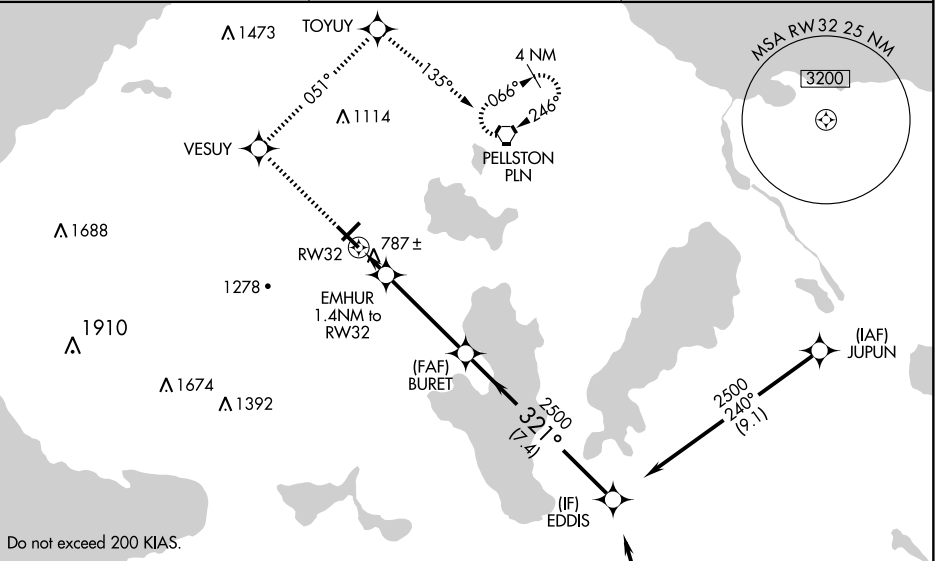
PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)

⚠ Inoperative table does not apply to LNAV Cat D. Baro-VNAV NA when using Harbor Springs altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Harbor Springs altimeter setting and increase all DA 28 feet and all MDA 40 feet. For inoperative MALSR when using Harbor Springs altimeter setting, increase LNAV Cat D visibility to 1 ¼ mile.

MALSR

MISSED APPROACH: Climb to 2600 direct VESUY and via track 051° to TOYUY and via track 135° to PLN VORTAC and hold.

ASOS 119.025	MINNEAPOLIS CENTER 134.6 354.05	UNICOM 123.0 (CTAF) 0
------------------------	---	---------------------------------



ELEV 721 **D** 798±

HIRL Rwy 14-32 **0**
MIRL Rwy 5-23 **0**
REIL Rws 5, 14, and 23 **0**

Procedure NA for arrivals at RONDO via V609 Southbound.

2600	VESUY	051° TRK	TOYUY	135° TRK	PLN
------	-------	----------	-------	----------	-----

*LNAV only

CATEGORY	A	B	C	D
LPV DA	912-1/2			200 (200-1/2)
LNAV/VNAV DA	1056-3/4			344 (400-3/4)
LNAV MDA	1040-1/2 328 (400-1/2)			1040-1 328 (400-1)
CIRCLING	1260-1 539 (600-1)	1280-1 559 (600-1)	1280-1 1/2 559 (600-1 1/2)	1420-2 1/4 699 (700-2 1/4)

Procedure Turn NA

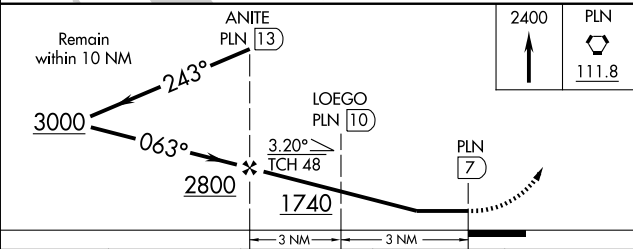
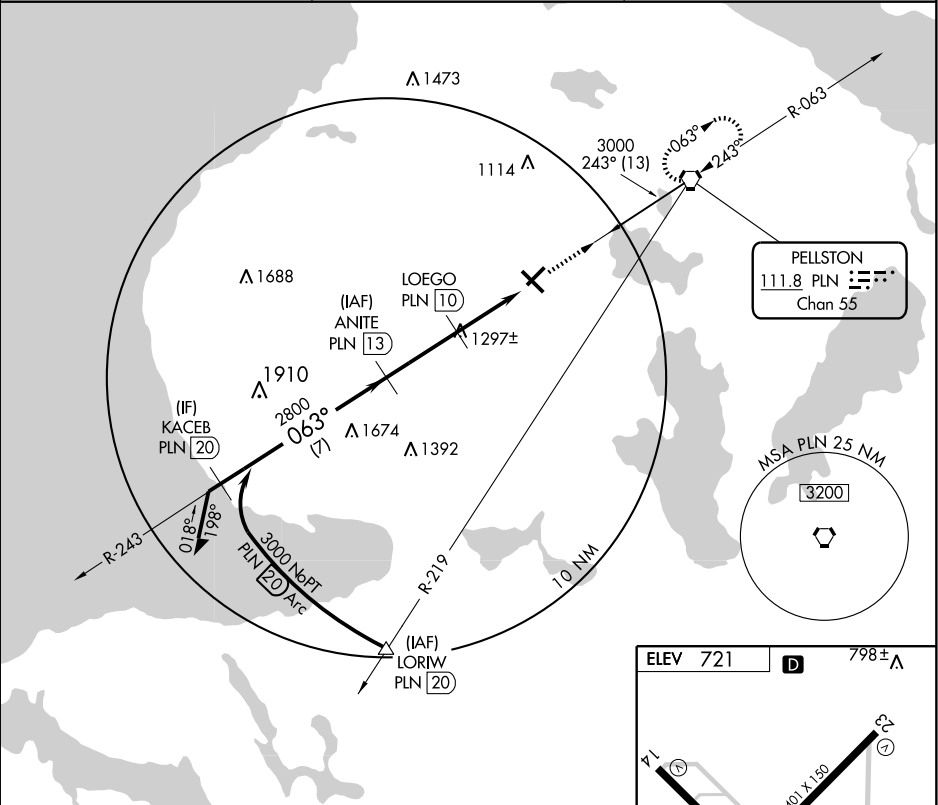
GS 3.00° TCH 54

VORTAC PLN	APP CRS	Rwy Idg	5395
111.8	063°	TDZE	716
Chan 55		Apt Elev	721

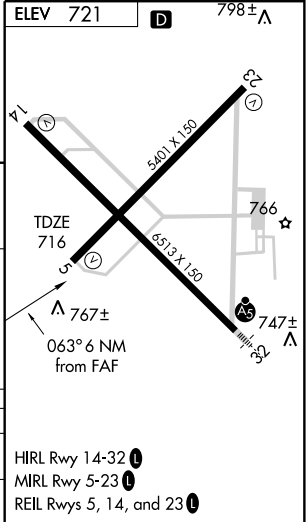
VOR/DME RWY 5
PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)

<p>▼ When local altimeter setting not received, use Harbor Springs altimeter setting and increase all MDA 40 feet, increase S-5 Cat A/C/D visibilities ¼ mile.</p> <p>▲</p>	<p>MISSED APPROACH: Climb to 2400 direct PLN VORTAC and hold.</p>
---	---

ASOS 119.025	MINNEAPOLIS CENTER 134.6 354.05	UNICOM 123.0 (CTAF) 0
-----------------	------------------------------------	--------------------------



CATEGORY	A	B	C	D
S-5	1560-1 844 (900-1)	1560-1¼ 844 (900-1¼)	1560-2½ 844 (900-2½)	1560-2¾ 844 (900-2¾)
CIRCLING	1560-1 839 (900-1)	1560-1¼ 839 (900-1¼)	1560-2½ 839 (900-2½)	1560-2¾ 839 (900-2¾)



VORTAC PLN	APP CRS	Rwy Idg	5395
111.8	245°	TDZE	721
Chan 55		Apt Elev	721

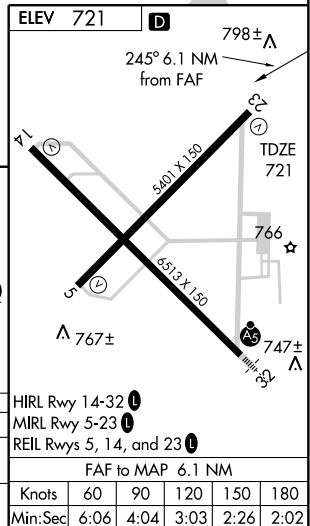
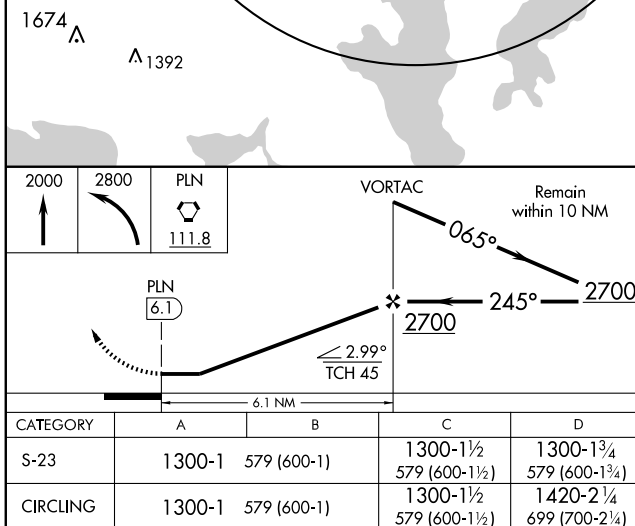
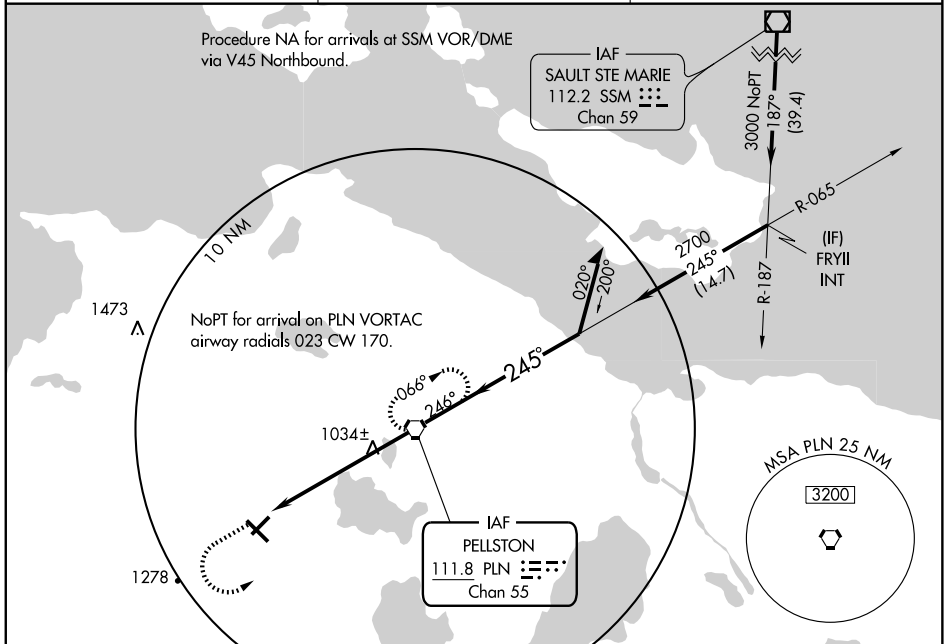
VOR RWY 23

PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)

When local altimeter setting not received, use Harbor Springs altimeter setting and increase all MDA 40 feet. Increase all Cat C and S-23 Cat D visibility ¼ mile. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 2000 then climbing left turn to 2800 direct PLN VORTAC and hold.

ASOS 119.025	MINNEAPOLIS CENTER 134.6 354.05	UNICOM 123.0 (CTAF) 0
-----------------	------------------------------------	--------------------------



DETROIT, MICHIGAN



ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUX INT. Thence

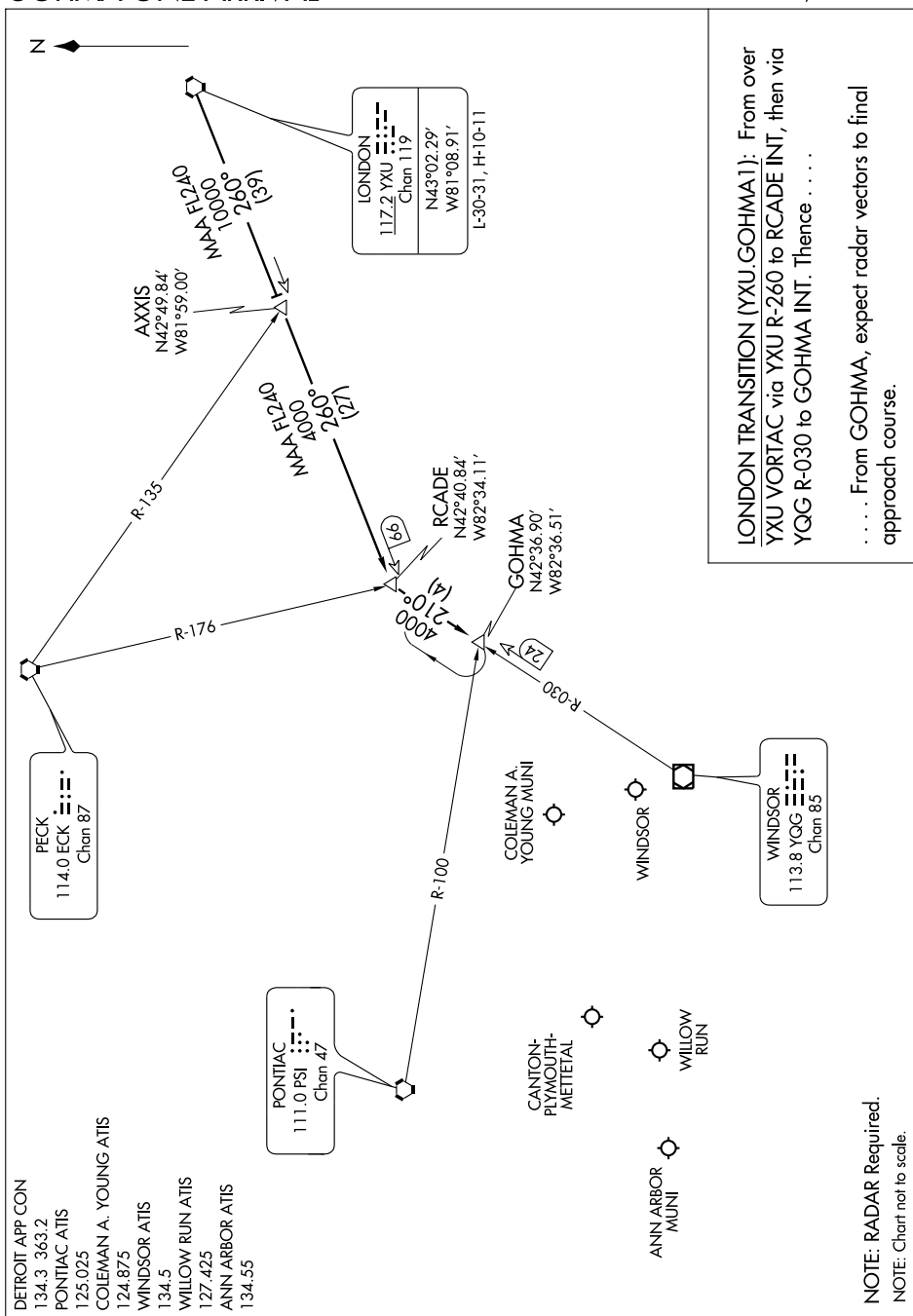
FORT WAYNE TRANSITION (FWA.CRUX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUX INT. Thence

LITCHFIELD TRANSITION (LFD.CRUX4): From over LFD VORTAC via LFD R-106 to CRUX INT. Thence

. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUX INT via 025° heading.

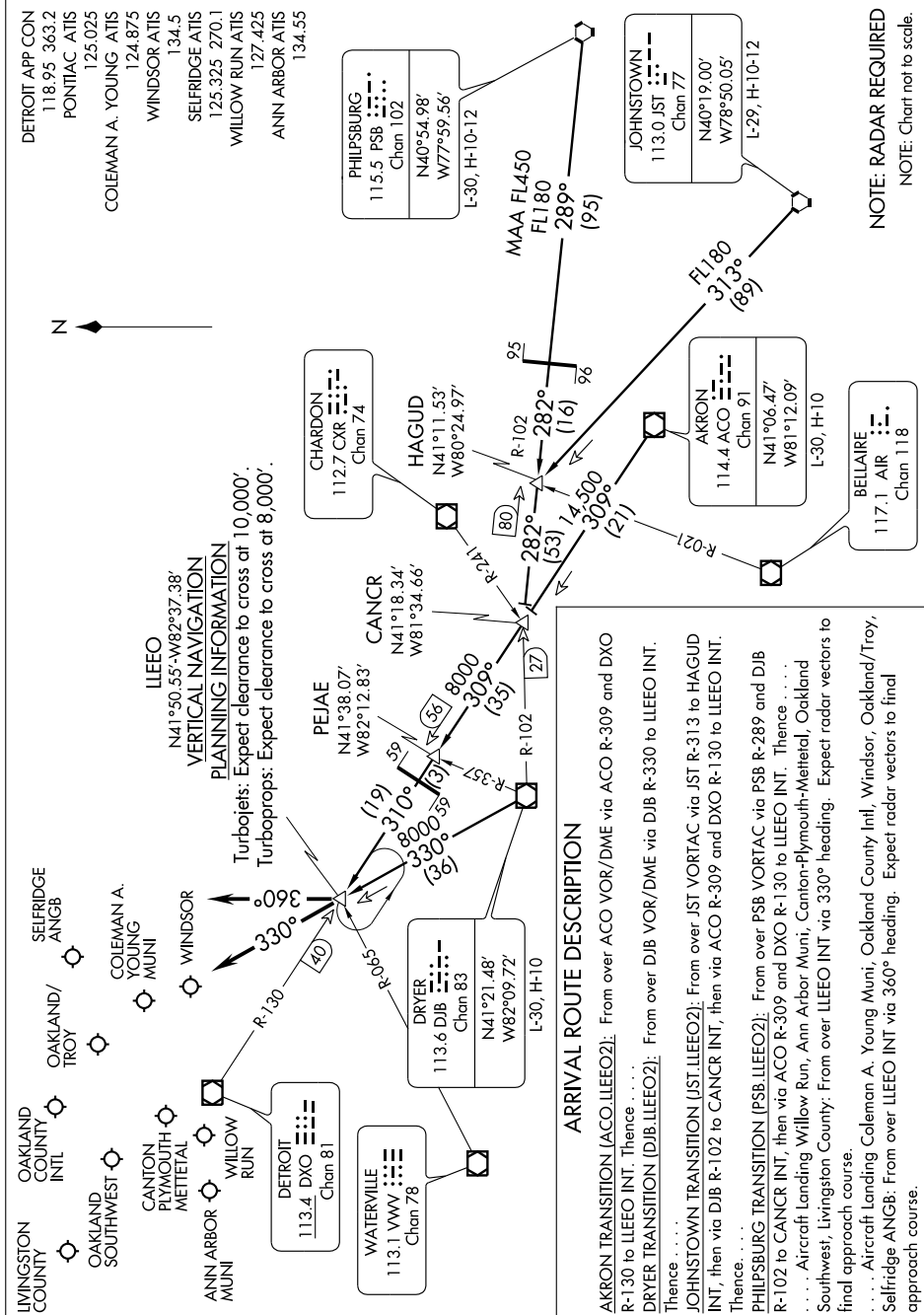
. . . . Aircraft landing YIP or ARB: From over CRUX INT via 050° heading.
Expect radar vector to final approach course.

EC-1. 17 DEC 2009 to 14 JAN 2010



LLEEO TWO ARRIVAL

DETROIT, MICHIGAN



APP CRS	Rwy Idg	2303
183°	TDZE	696
	Apt Elev	696

RNAV (GPS) RWY 18

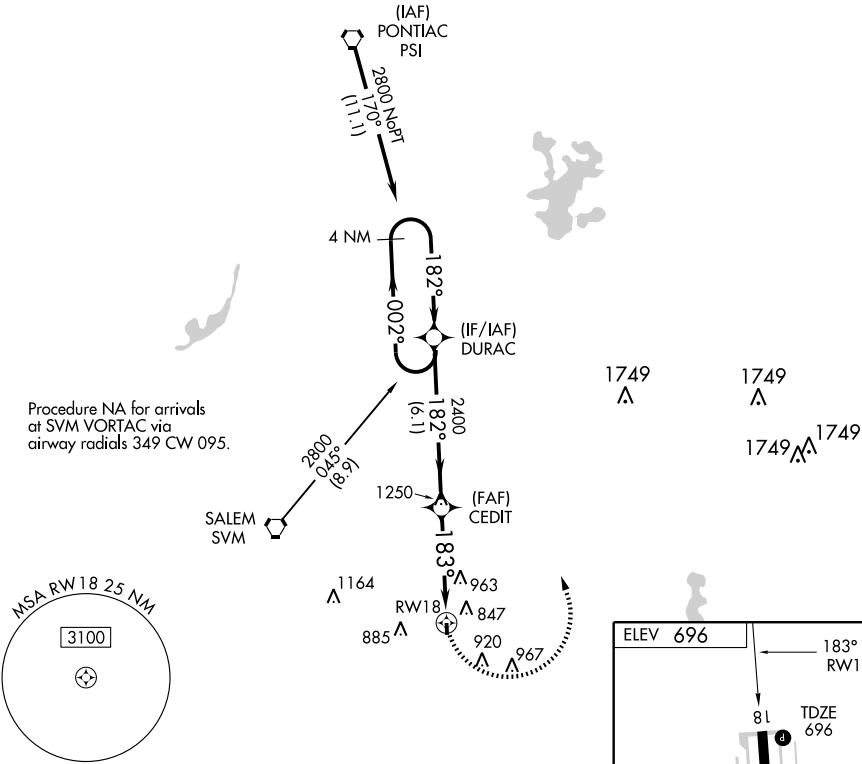
PLYMOUTH / CANTON-PLYMOUTH-METTETAL (1D2)



▼ Use Willow Run altimeter setting; if not received, use Detroit Metropolitan Wayne County altimeter setting. Visibility reduction by helicopters NA.
▲ NA Circling NA at night. DME/DME RNP-0.3 NA.

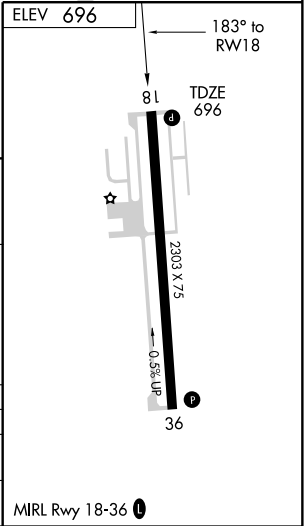
MISSED APPROACH:
Climbing left turn to 2800
direct DURAC and hold.

DETROIT APP CON
118.95 363.2

UNICOM
122.7 (CTAF) **1**



4 NM Holding Pattern		DURAC		VGSI and descent angles not coincident.			
2800 ← 002° 182° →		182°		CREDIT 2400 * 183°		3.77° TCH 30	
		6.1 NM		4.2 NM		RW18	
CATEGORY	A	B	C	D			
LNAV MDA	1300-1 604 (700-1)	NA					
CIRCLING	1300-1 604 (700-1)	NA					



SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON

127.5 239.275

WILLOW RUN ATIS 127.425

PONTIAC ATIS 125.025

COLEMAN A. YOUNG ATIS 124.875

WINDSOR ATIS 134.5

SELFREDGE ATIS 125.325 270.1

SPRTN

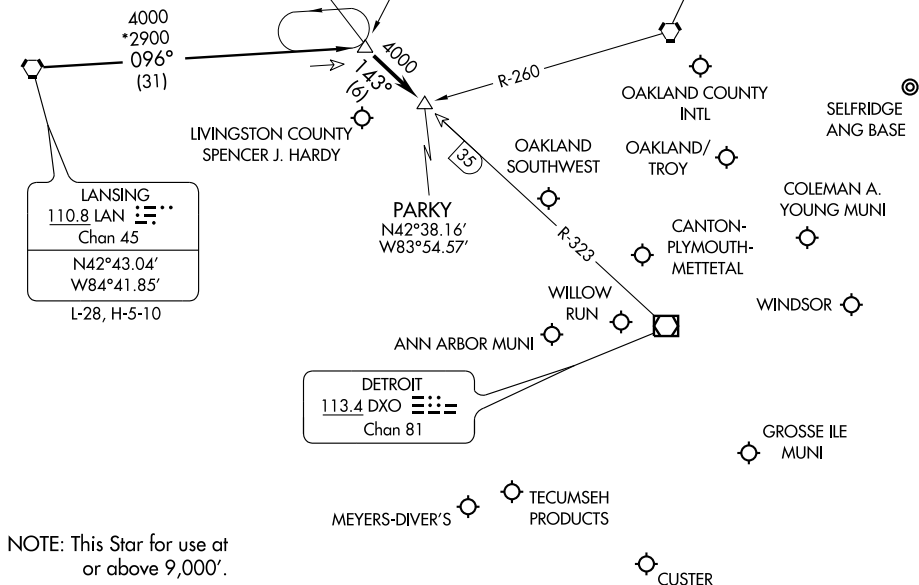
N42°42.52'-W84°00.23'

VERTICAL NAVIGATION

PLANNING INFORMATION

TURBOJETS/TURBOPROPS:

Expect clearance to cross at 9000'.



NOTE: This Star for use at
or above 9,000'.

NOTE: Chart not to scale.

LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence

. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ,

1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence

. . . . Expect radar vectors to final approach course.

SVM VORTAC 114.3 Chan 90	APP CRS 124°	Rwy Idg TDZE Apt Elev	N/A N/A 696
--------------------------------	-----------------	-----------------------------	-------------------

VOR-A

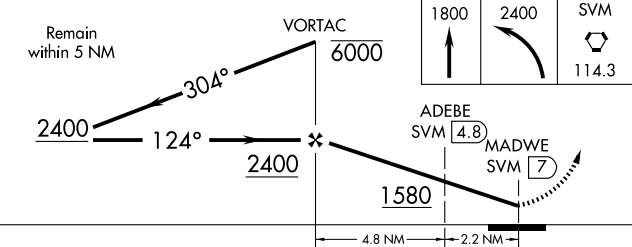
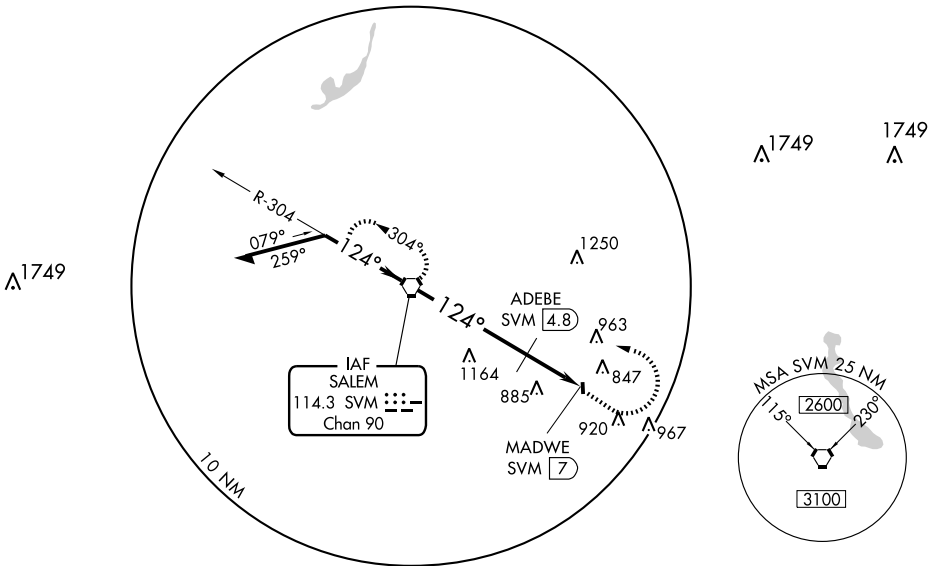
PLYMOUTH / CANTON-PLYMOUTH-METTETAL (1D2)

▼ Use Willow Run altimeter setting; if not received, use Detroit Metropolitan Wayne County altimeter setting.
▲ NA Visibility reduction by helicopters NA.

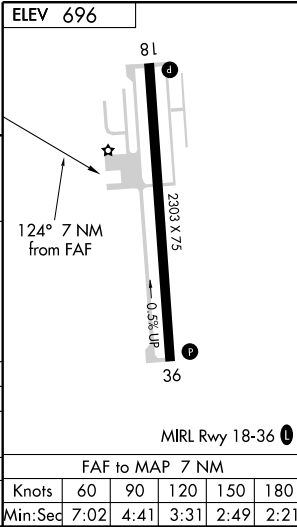
MISSED APPROACH: Climb to 1800 then climbing left turn to 2400 direct SVM VORTAC and hold.

DETROIT APP CON
118.95 363.2

UNICOM
122.7 (CTAF) 1



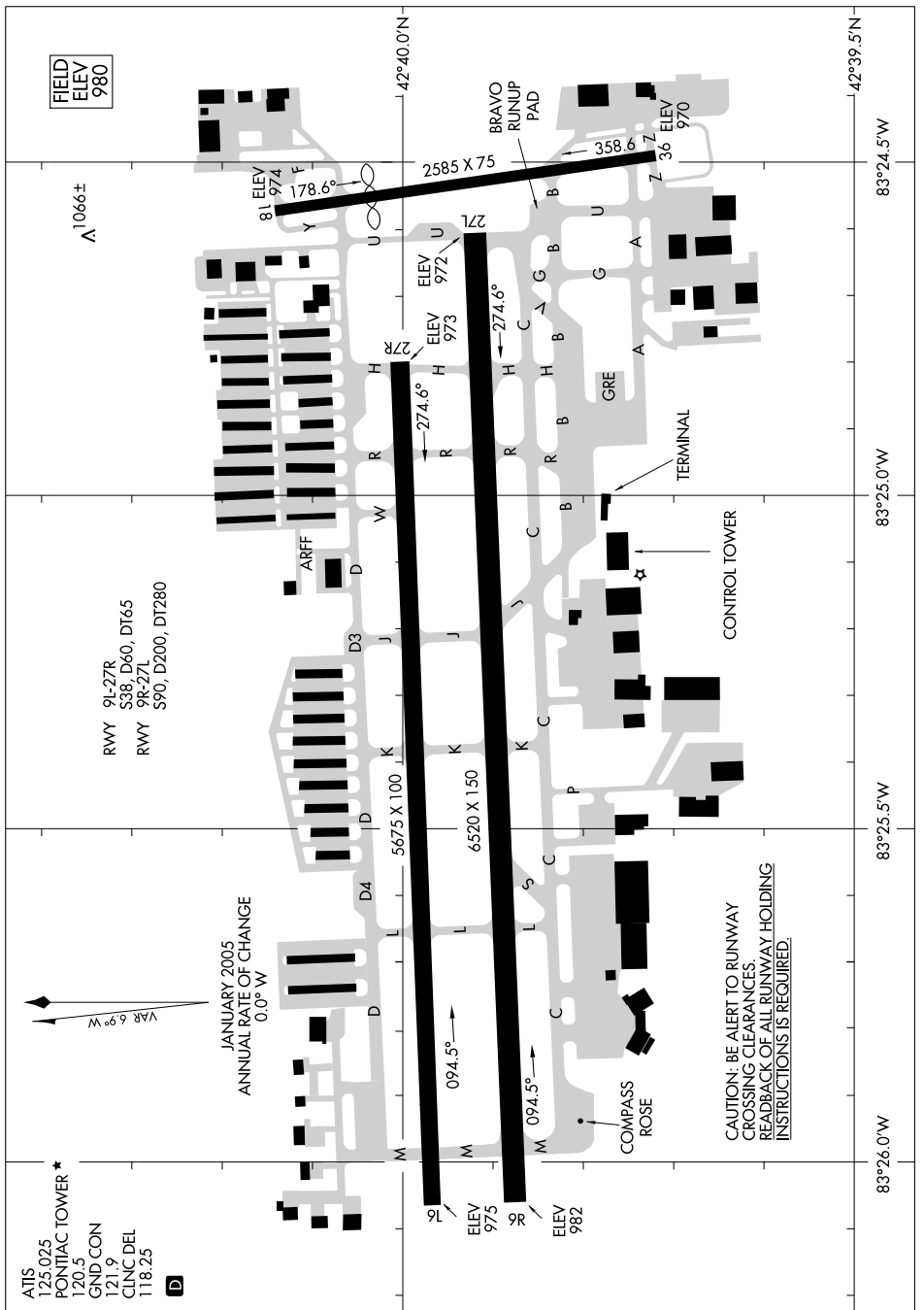
CATEGORY	A	B	C	D
CIRCLING	1580-1¼ 884 (900-1¼)	NA		
ADEBE FIX MINIMUMS				
CIRCLING	1220 - 1 524 (600-1)	NA		



AIRPORT DIAGRAM

AL-5052 (FAA)

PONTIAC/OAKLAND COUNTY INTL (PTK)
PONTIAC, MICHIGAN



EC-1, 17 DEC 2009 to 14 JAN 2010

AKRON TWO DEPARTURE

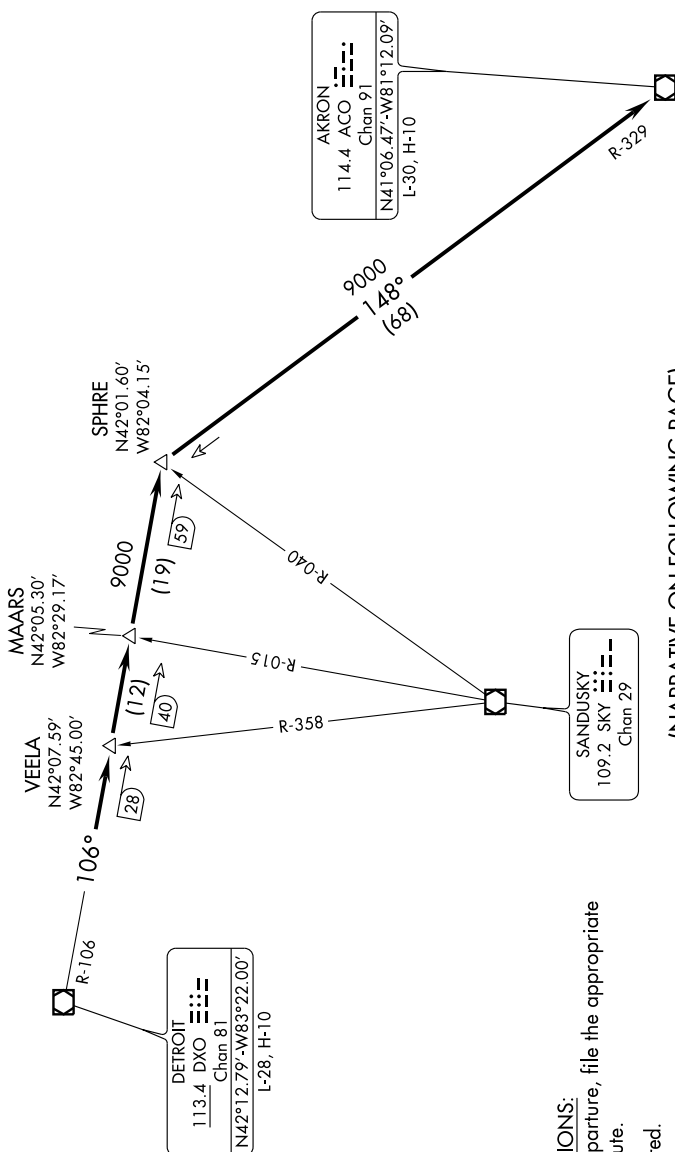
SL-5052 (FAA)

PONTIAC/ OAKLAND COUNTY INTL (PTK)

PONTIAC, MICHIGAN

ATIS 125.025
 CINC DEL
 118.25
 GND CON
 121.9
 PONTIAC TOWER ★
 120.5
 DETROIT DEP CON
 127.5 239.275
 CTAF
 120.5

TAKE-OFF MINIMUMS
 Rwy 17, 35: NA - Environmental.
 Rwy 9L, 9R, 27L, 27R: STANDARD.



N

SPECIAL INSTRUCTIONS:

When using this departure, file the appropriate depicted fix and route.

NOTE: Radar Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9L/R and 27L/R: Climb via assigned heading for radar vectors, thence. . . .

. . . .to intercept DXO VOR/DME R-106 to SPHRE INT, then via ACO R-329 to ACO VOR/DME. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES

Rwy 9R: Multiple Trees beginning 1382' from DER, 647' left of centerline, up to 41' AGL/1011' MSL.

Ant on Hangar 870' from DER, 732' right of centerline, 36' AGL/1006' MSL.

Rwy 27L: Multiple Trees beginning 1075' from DER, 630' left of centerline, up to 78' AGL/1048' MSL.

Tree 1702' from DER, 945' right of centerline, 71' AGL/1041' MSL.

Rwy 27R: Tree 2057' from DER, 395' right of centerline, 71' AGL/1041 MSL'.

DETROIT, MICHIGAN



ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUXX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUXX INT. Thence

FORT WAYNE TRANSITION (FWA.CRUXX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUXX INT. Thence

LITCHFIELD TRANSITION (LFD.CRUXX4): From over LFD VORTAC via LFD R-106 to CRUXX INT. Thence

. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUXX INT via 025° heading.

. . . . Aircraft landing YIP or ARB: From over CRUXX INT via 050° heading.
Expect radar vector to final approach course.

EC-1 17 DEC 2009 to 14 JAN 2010



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9L/R and 27L/R: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude / flight level ten (10) minutes after departure.

CHARDON TRANSITION (ERRTH2.CXR): From over ERRTH INT via CXR R-325 to CXR VOR/DME.

KEATING TRANSITION (ERRTH2.ETG): From over ERRTH INT via CXR R-325 to CXR VOR/DME, then via CXR R-102 and ETG R-289 to MIGET INT, then via ETG R-289 to ETG VORTAC.

SLATE RUN TRANSITION (ERRTH2.SLT): (DME Required) From over ERRTH INT via YQG R-101 to TRACE INT, then via ECK R-139 to DORET INT, then via SLT R-287 to SLT VORTAC.

TAKE-OFF OBSTACLES:

Rwy 9R: Multiple trees beginning 1382' from DER, 647' left of centerline, up to 41' AGL/1011' MSL. Ant on hangar 870' from DER, 732' right of centerline, 36' AGL/1006' MSL.

Rwy 27L: Multiple trees beginning 1075' from DER, 630' left of centerline, up to 78' AGL/1048' MSL. Tree 1702' from DER, 945' right of centerline, 71' AGL/1041' MSL.

Rwy 27R: Tree 2057' from DER, 395' right of centerline, 71' AGL/1041' MSL.

FORT WAYNE THREE DEPARTURE

SL-5052 (FAA)

PONTIAC, MICHIGAN

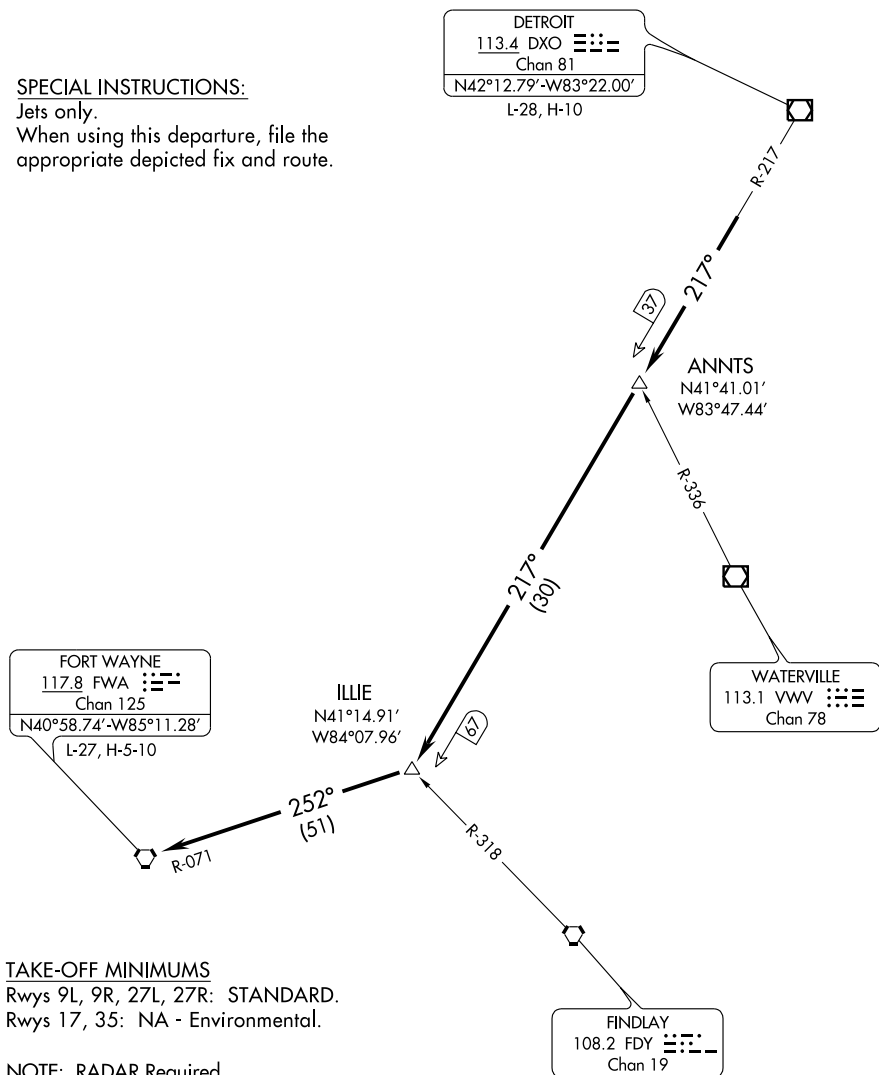


ATIS 125.025
CLNC DEL
118.25
GND CON
121.9
PONTIAC TOWER ★
120.5 (CTAF)
DETROIT DEP CON
127.5 239.275

SPECIAL INSTRUCTIONS:

Jets only.

When using this departure, file the appropriate depicted fix and route.

TAKE-OFF MINIMUMS

Rwys 9L, 9R, 27L, 27R: STANDARD.
Rwys 17, 35: NA - Environmental.

NOTE: RADAR Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9L/R AND 27L/R: Climb via assigned heading for radar vectors, thence. . . .

. . . .to intercept DXO VOR/DME R-217 to ILLIE INT, then via FWA R-071 to FWA VORTAC. Maintain 3000, expect clearance to filed flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

- Rwy 9R: Multiple trees beginning 1382' from DER, 647' left of centerline, up to 41' AGL/1011' MSL.
Ant on hangar 870' from DER, 732' right of centerline, 36' AGL/1006' MSL.
- Rwy 27L: Multiple trees beginning 1075' from DER, 630' left of centerline, up to 78' AGL/1048' MSL.
Tree 1702' from DER, 945' right of centerline, 71' AGL/1041' MSL.
- Rwy 27R: Tree 2057' from DER, 395' right of centerline, 71' AGL/1041' MSL.

LOC I-PTK	APP CRS	Rwy Idg	6520
111.1	092°	TDZE	980
		Apt Elev	980

ILS or LOC RWY 9R

PONTIAC/OAKLAND COUNTY INTL (PTK)

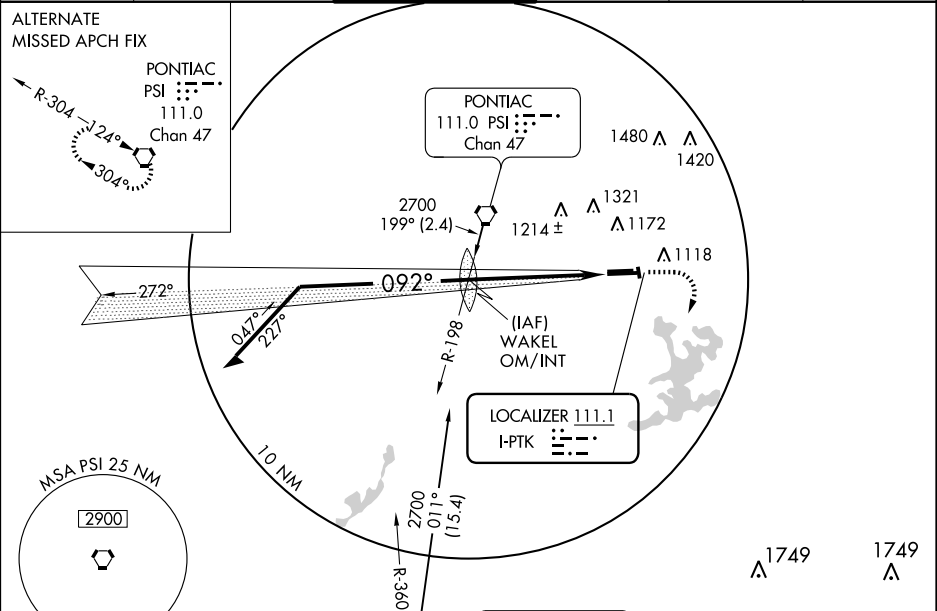
⚠ *RVR 1800 authorized with the use of FD or AP or HUD to DA.

⚠ When local altimeter setting not received, use Coleman A. Young Muni altimeter setting and increase DA 105 feet and all MDA 120 feet, increase S-LOC 9R Cats C and D visibility ½ mile, circling Cat B visibility ¼ mile, Cats C and D visibility ½ mile.

MALSR

MISSED APPROACH: Climb to 1600, then climbing right turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	PONTIAC TOWER★	GND CON	CLNC DEL	UNICOM
125.025	127.5 363.2	120.5 (CTAF)	121.9	118.25	122.95



ELEV 980

1108 ± Δ

092° 5 NM from FAF

1066 ± Δ

1018 ± Δ

5675 X 100

27R

81

2595

1021

9R

6520 X 150

TWR

1037

1042 ± Δ

1029 ± Δ

1024 ± Δ

VGSI and ILS glidepath not coincident.

Remain within 10 NM

WAKEL OM/INT

1600 3000 SVM 114.3

2700 272° 092° 2669 2700

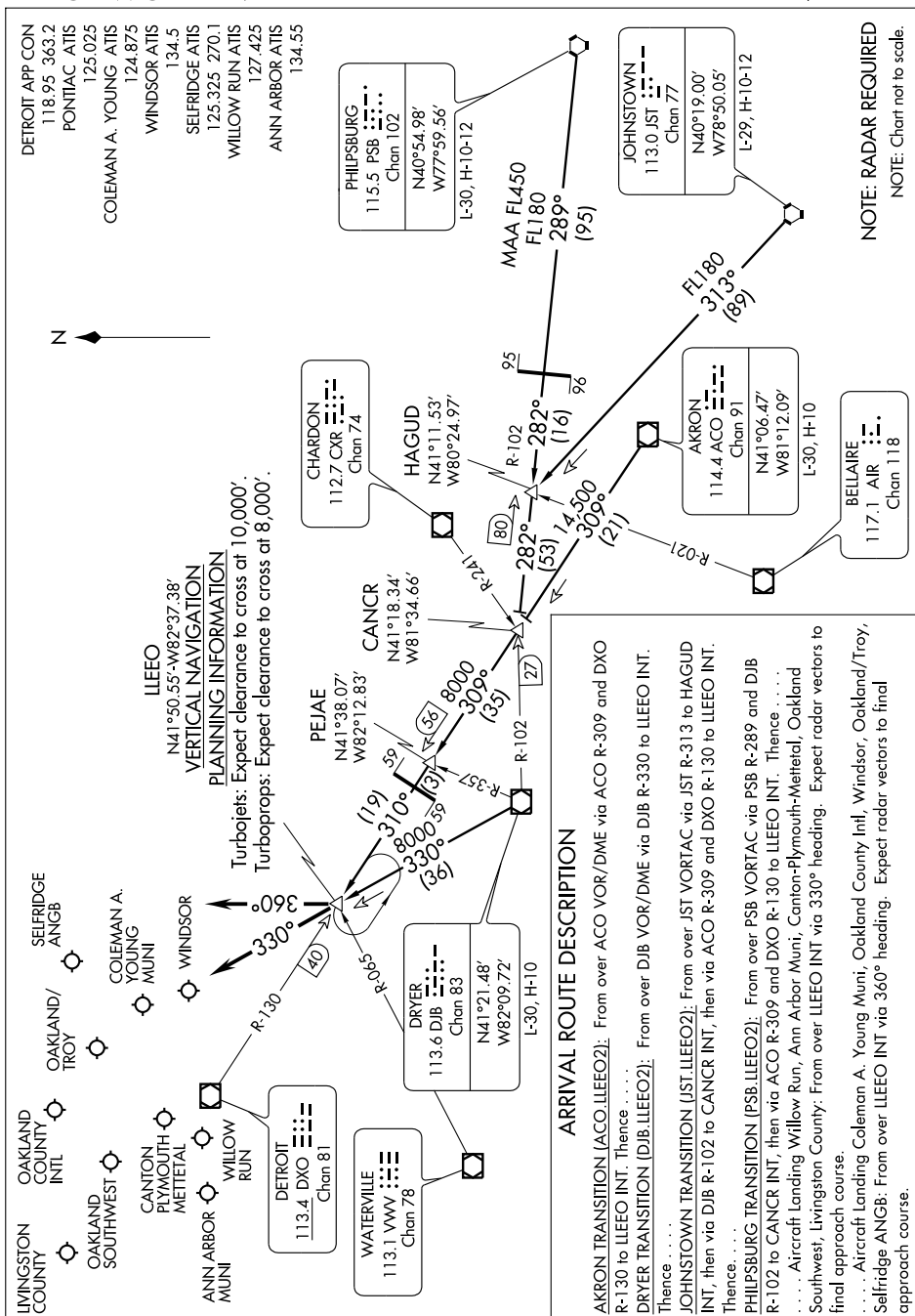
GS 3.00° TCH 55

5 NM

CATEGORY	A	B	C	D	FAF to MAP 5 NM
S-ILS 9R		*1180/24	200 (200-½)		Knots 60 90 120 150 180 Min:Sec 5:00 3:20 2:30 2:00 1:40
S-LOC 9R	1620/24	640 (700-½)	1620/60 640 (700-¼)	1620-1½ 640 (700-1½)	
CIRCLING	1620-1	640 (700-1)	1620-1¾ 640 (700-¾)	1640-2 660 (700-2)	

LEEO TWO ARRIVAL

DETROIT, MICHIGAN



NOTE: CHART NOT TO SCALE.

EC-1 17 DEC 2009 to 14 JAN 2010

LOC I-PTK 111.1	APP CRS 272°	Rwy Idg TDZE Apt Elev	6520 974 980
---------------------------	------------------------	-----------------------------	---

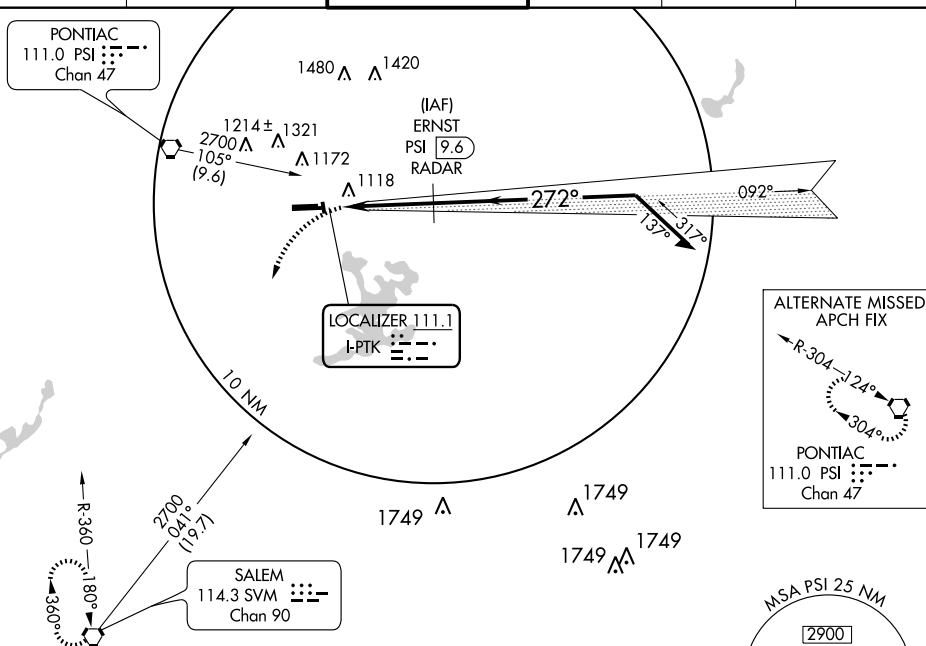
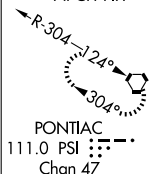
LOC BC RWY 27L

PONTIAC/OAKLAND COUNTY INTL (PTK)

▼ When local altimeter setting not received, use Coleman A. Young Muni
altimeter setting and increase all MDA 120 feet, increase S-27L Cat C/D
visibility ¼ mile and Circling Cat C/D visibility ½ mile.

MISSED APPROACH: Climbing left turn to
3000 direct SVM VORTAC and hold.

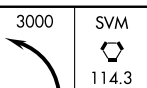
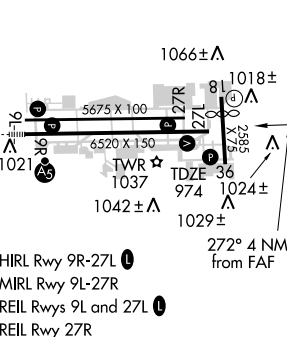
ATIS 125.025	DETROIT APP CON 127.5 363.2	PONTIAC TOWER ★ 120.5 (CTAF) A5	GND CON 121.9	CLNC DEL 118.25	UNICOM 122.95 U
------------------------	---------------------------------------	--	-------------------------	---------------------------	----------------------------------

ALTERNATE MISSED
APCH FIX

MSA PSI 25 NM

2900

ELEV 980

D**BACK COURSE
DME or RADAR REQUIRED**ERNST
PSI **9.6**
RADARRemain
within 10 NM

Disregard glide slope indications.

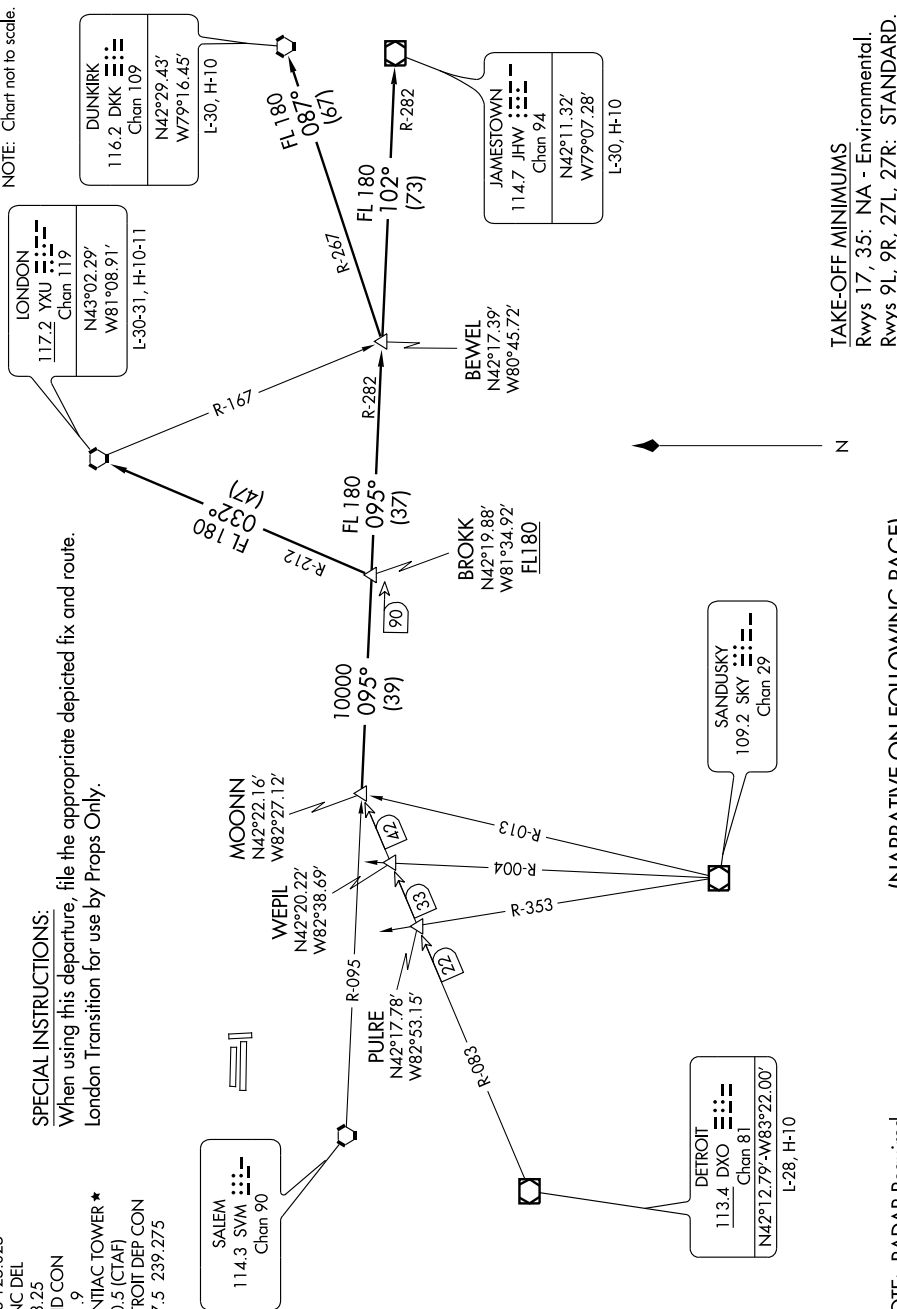
CATEGORY	A	B	C	D
S-27L	1420-1	446 (500-1)	1420-1¼ 446 (500-1¼)	1420-1½ 446 (500-1½)
CIRCLING	1500-1 520 (600-1)	1520-1 540 (600-1)	1560-1½ 580 (600-1½)	1640-2 660 (700-2)

MOONN TWO DEPARTURE

SL-5052 (FAA)

PONTIAC, MICHIGAN

NOTE: Chart not to scale.





DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9L/R AND 27L/R:

Climb via assigned heading for radar vectors to join the assigned SID.
Maintain 3000 feet, expect clearance to filed altitude/ flight level
ten (10) minutes after departure.

DUNKIRK TRANSITION (MOONN2.DKK): From over MOONN INT via
SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to
BEWEL INT, then via DKK R-267 to DKK VORTAC.

JAMESTOWN TRANSITION (MOONN2.JHW): From over MOONN INT via
SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to
BEWEL INT, then via JHW R-282 to JHW VOR/DME.

LONDON TRANSITION (MOONN2.YXU): From over MOONN INT via
SVM R-095 to BROKK INT, then via YXU R-212 to YXU VORTAC.

TAKE-OFF OBSTACLES

- Rwy 9R: Multiple trees beginning 1382' from DER, 647' left of centerline,
up to 41' AGL/1011' MSL. Ant on hangar 870' from DER, 732' right of
centerline, 36' AGL/1006' MSL.
- Rwy 27L: Multiple trees beginning 1075' from DER, 630' left of centerline,
up to 78' AGL/1048' MSL. Tree 1702' from DER, 945' right of centerline,
71' AGL/1041' MSL.
- Rwy 27R: Tree 2057' from DER, 395' right of centerline, 71' AGL/1041' MSL.





DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9L/R AND 27L/R: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude / flight level ten (10) minutes after departure.

SPECIAL INSTRUCTIONS:

When using this departure, file the appropriate depicted departure fix and route.
Aircraft landing/overflying Lansing (LAN) at 10,000 feet or below, file via SPRTN.
Aircraft landing/overflying Flint (FNT) at 10,000 feet or below, file via LAYNE.
Aircraft landing/overflying Toledo (TOL) at 10,000 feet or below, file via RUZZL.
Aircraft over HARWL must file FL220 and below.

TAKE-OFF OBSTACLES:

Rwy 9R: Multiple trees beginning 1382' from DER, 647' left of centerline, up to 41' AGL/1011' MSL. Ant on hangar 870' from DER, 732' right of centerline, 36' AGL/1006' MSL.

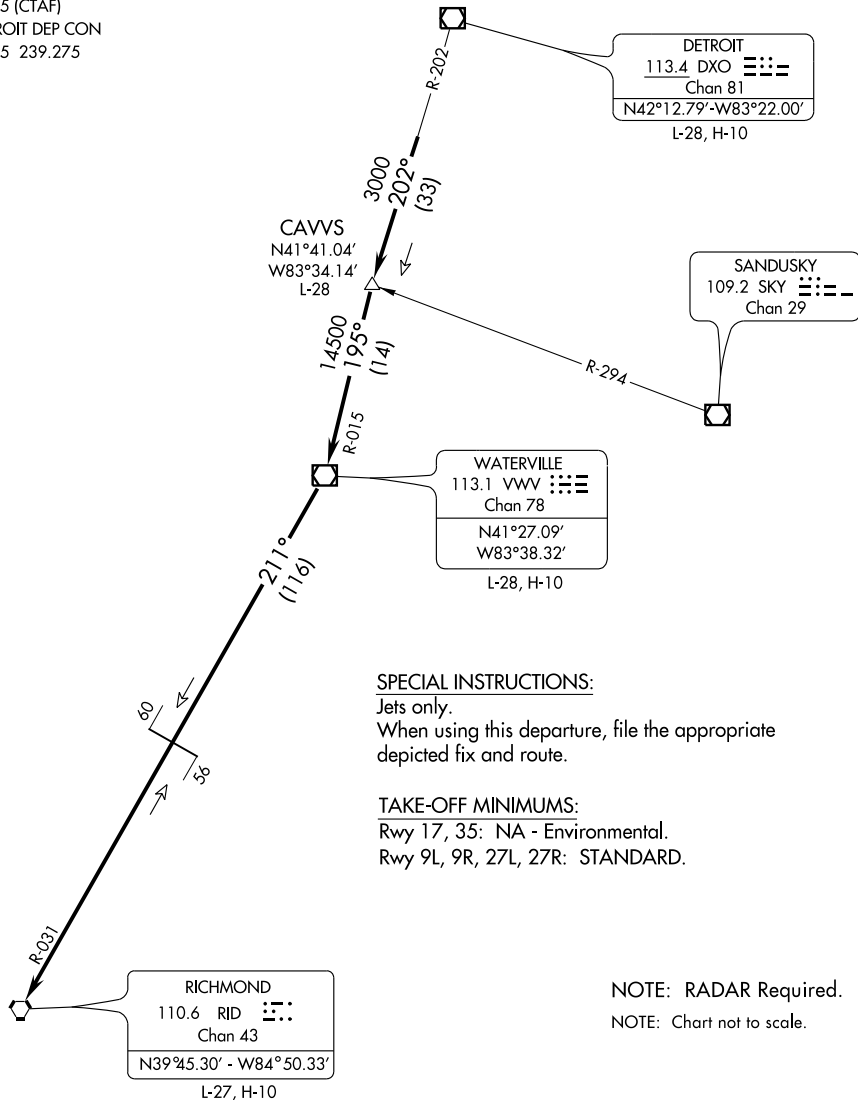
Rwy 27L: Multiple trees beginning 1075' from DER, 630' left of centerline, up to 78' AGL/1048' MSL. Tree 1702' from DER, 945' right of centerline, 71' AGL/1041' MSL.

Rwy 27R: Tree 2057' from DER, 395' right of centerline, 71' AGL/1041' MSL.

RICHMOND FOUR DEPARTURE SL-5052 (FAA)

PONTIAC, MICHIGAN

ATIS 125.025
 CLNC DEL
 118.25
 GND CON
 121.9
 PONTIAC TOWER ★
 120.5 (CTAF)
 DETROIT DEP CON
 127.5 239.275

SPECIAL INSTRUCTIONS:

Jets only.

When using this departure, file the appropriate depicted fix and route.

TAKE-OFF MINIMUMS:

Rwy 17, 35: NA - Environmental.

Rwy 9L, 9R, 27L, 27R: STANDARD.

NOTE: RADAR Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9L/R AND 27L/R:

Climb via assigned heading for radar vectors, thence. . . .

. . . . To intercept DXO VOR/DME R-202 to CAVVS INT/DXO 33 DME, then via VWV R-015 to VWV VOR/DME. Then right turn via VWV R-211 and RID R-031 to RID VORTAC. Maintain 3,000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE OFF OBSTACLES:

- Rwy 9R: Multiple trees beginning 1382' from DER, 647' left of centerline, up to 41' AGL/1011' MSL.
Ant on hangar 870' from DER, 732' right of centerline, 36' AGL/1006' MSL.
- Rwy 27L: Multiple trees beginning 1075' from DER, 630' left of centerline, up to 78' AGL/1048' MSL.
Tree 1702' from DER, 945' right of centerline, 71' AGL/1041' MSL.
- Rwy27R: Tree 2057' from DER, 395' right of centerline, 71' AGL/1041' MSL.

RNAV (GPS) RWY 9R
PONTIAC/OAKLAND COUNTY INTL (PTK)

MISSED APPROACH:
Climb to 3000
direct GZVY and
hold.

ATIS 125.025	DETROIT APP CON 127.5 363.2	PONTIAC TOWER ★ 120.5 (CTAF) 	GND CON 121.9	CLNC DEL 118.25	UNICOM 122.95 
------------------------	---------------------------------------	---	-------------------------	---------------------------	---

1749 A

ELEV 980

D

092° to RW09R

1108 ± Δ

1066 ± Δ

1018 ± Δ

5675 X 100

6520 X 150

TVWR ☆

1037

1042 ± Δ

1029 ±

1024 ± Δ

1021

TDZE 980

HIRL Rwy 9R-27L L

MIRL Rwy 9L-27R

REIL Rwy 9L and 27L L

REIL Rwy 27R

		6.2 NM		2.3 NM	1.7	1.2	
CATEGORY	A	B	C	D			
LPV DA	1180/24 200 (200-½)						
LNAV/ VNAV DA	1579-1½ 599 (600-1½)						
LNAV MDA	1420/40 440 (500-¾)					1420/50 440 (500-1)	
CIRCLING	1500-1 520 (600-1)	1520-1 540 (600-1)	1560-1½ 580 (600-1½)	1640-2 660 (700-2)			

HIRL Rwy 9R-27L **L**
MIRL Rwy 9L-27R
REIL Rwy 9L and 27L
REIL Rwy 27R

⚠


For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F).
DME/DME RNP-0.3 NA. When local altimeter setting not received, use Coleman A. Young Muni altimeter setting and increase all DA 105 feet and all MDA 120 feet, increase LPV and LNAV/VNAV all Cats visibility ¼ mile, LNAV Cat C/D, and Circling Cat C/D visibility ½ mile.
Baro-VNAV and VDP NA when using Coleman A. Young Muni altimeter setting.

MISSED APPROACH:

Climb to 3000 direct EDESE and hold.


ATIS
125.025

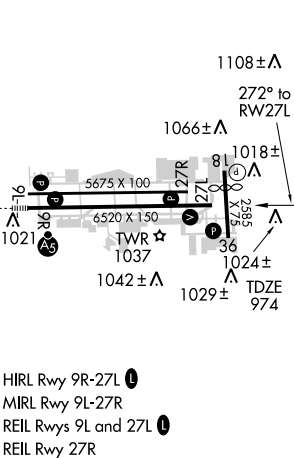
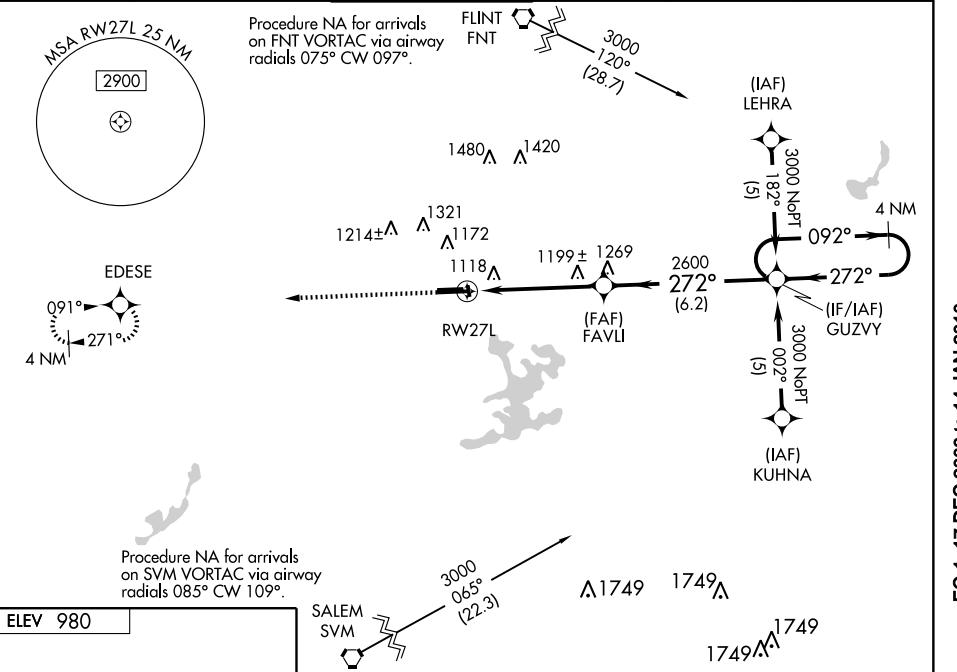
DETROIT APP CON
127.5 363.2



PONTIAC TOWER ★
120.5 (CTAF) 

GND CON
121.9

CLNC DEL
118.25

UNICOM
122.95 



3000		EDESE		4 NM Holding Pattern	
					
*LNAV Only					

EC-1.17 DEC 2009 to 14 JAN 2010

ROSEWOOD TWO DEPARTURE

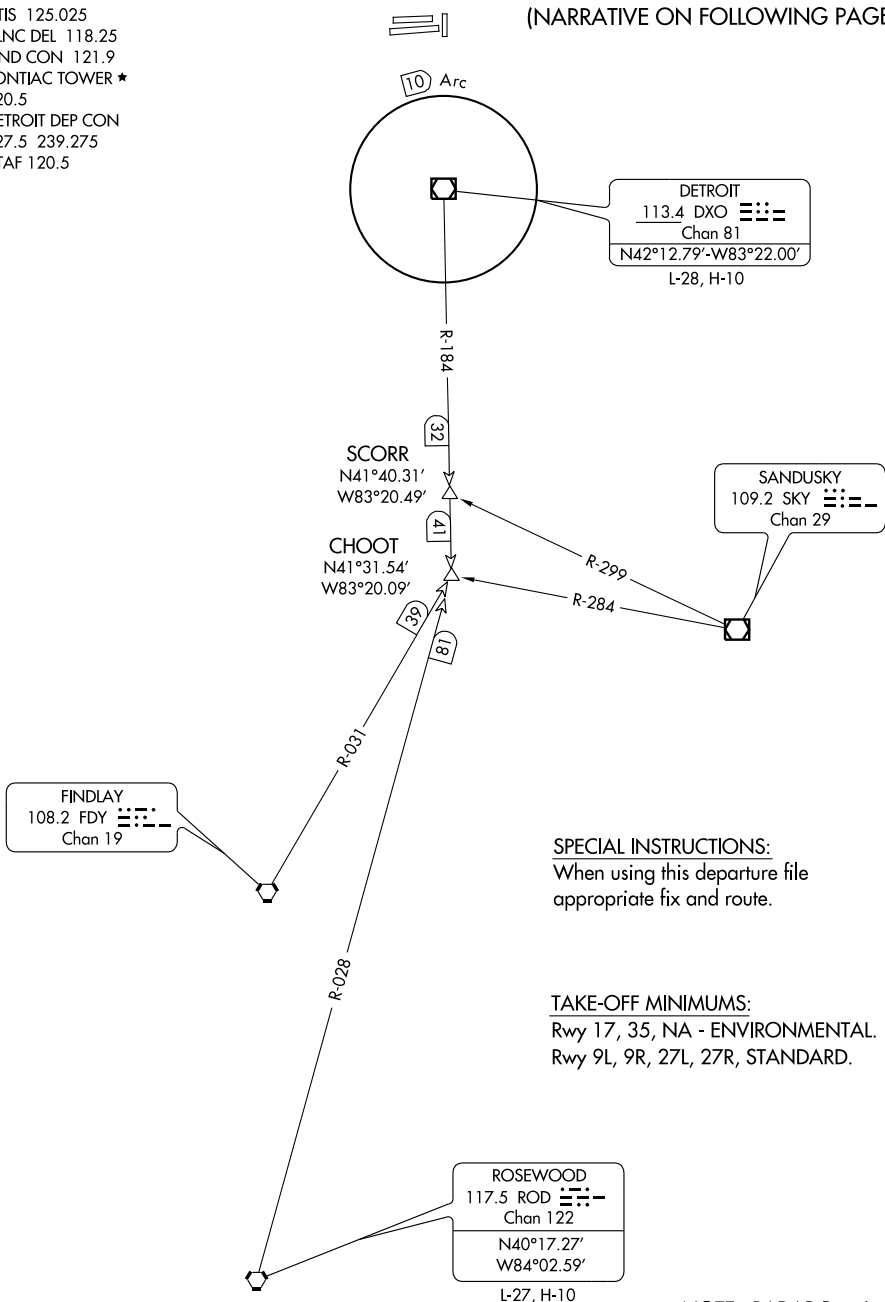
SL-5052 (FAA)

PONTIAC, MICHIGAN

ATIS 125.025
 CLNC DEL 118.25
 GND CON 121.9
 PONTIAC TOWER ★
 120.5
 DETROIT DEP CON
 127.5 239.275
 CTAF 120.5



(NARRATIVE ON FOLLOWING PAGE)

SPECIAL INSTRUCTIONS:

When using this departure file
 appropriate fix and route.

TAKE-OFF MINIMUMS:

Rwy 17, 35, NA - ENVIRONMENTAL.
 Rwy 9L, 9R, 27L, 27R, STANDARD.

NOTE: Chart not to scale.

NOTE: RADAR Required.



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9L/R AND 27L/R: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude / flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

Rwy 9R: Multiple trees beginning 1382' from DER, 647' left of centerline, up to 41' AGL/1011' MSL. Ant on hangar 870' from DER, 732' right of centerline, 36' AGL/1006' MSL.

Rwy 27L: Multiple trees beginning 1075' from DER, 630' left of centerline, up to 78' AGL/1048' MSL. Tree 1702' from DER, 945' right of centerline, 71' AGL/1041' MSL.

Rwy 27R: Tree 2057' from DER, 395' right of centerline, 71' AGL/1041' MSL.

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON

127.5 239.275

WILLOW RUN ATIS 127.425

PONTIAC ATIS 125.025

COLEMAN A. YOUNG ATIS 124.875

WINDSOR ATIS 134.5

SELFREDGE ATIS 125.325 270.1

SPRTN

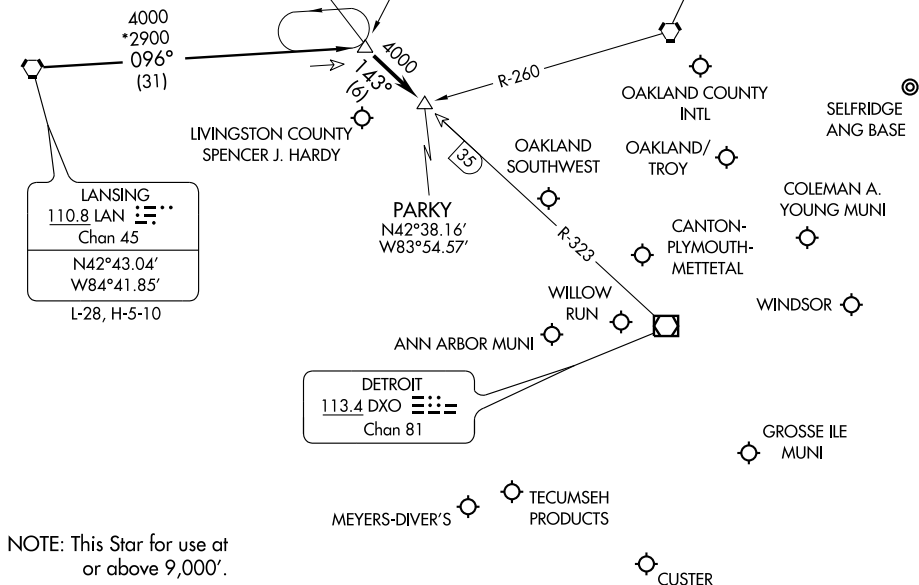
N42°42.52'-W84°00.23'

VERTICAL NAVIGATION

PLANNING INFORMATION

TURBOJETS/TURBOPROPS:

Expect clearance to cross at 9000'.



NOTE: This Star for use at
or above 9,000'.

NOTE: Chart not to scale.

LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence

. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ,

1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence

. . . . Expect radar vectors to final approach course.

ST. CLAIR THREE DEPARTURE

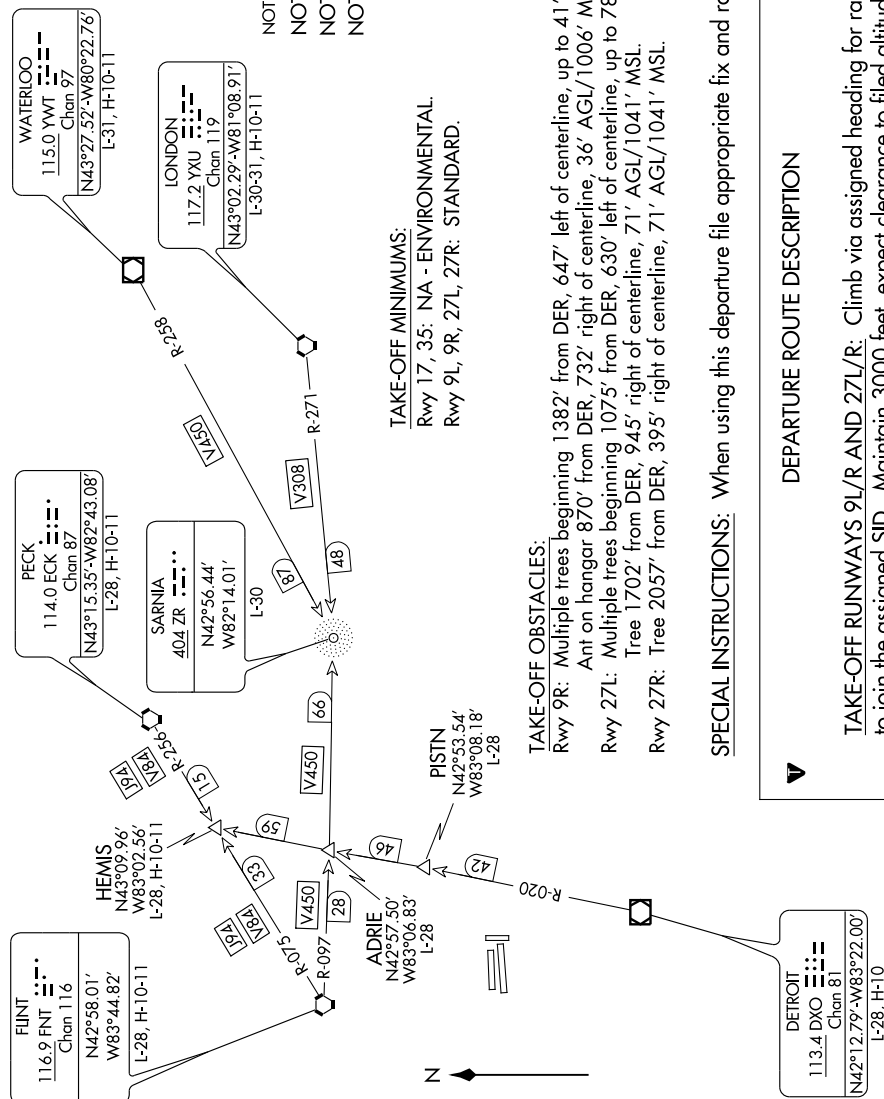
SL-5052 (FAA)

PONTIAC/ OAKLAND COUNTY INTL (PTK)

PONTIAC, MICHIGAN

ATIS 125.025
 CLNC DEL 118.25
 GND CON 121.9
 PONTIAC TOWER ★
 120.5
 DETROIT DEP CON
 127.5 239.275
 CTAF 120.5

NOTE: Chart not to scale.
 NOTE: RADAR REQUIRED.
 NOTE: DME REQUIRED.
 NOTE: JETS ONLY.

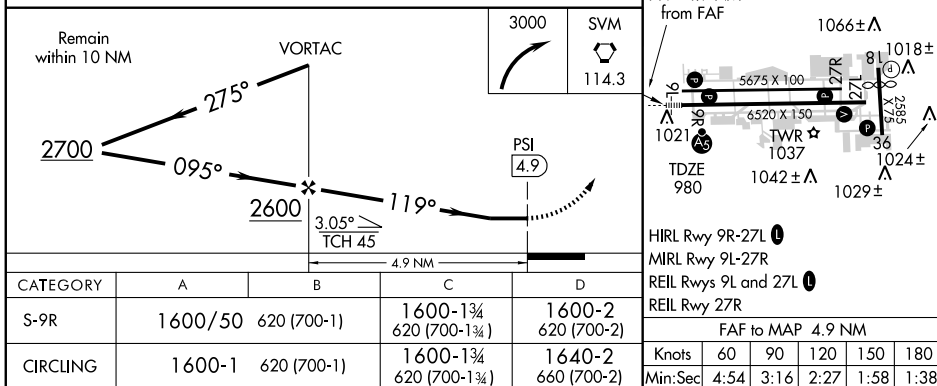
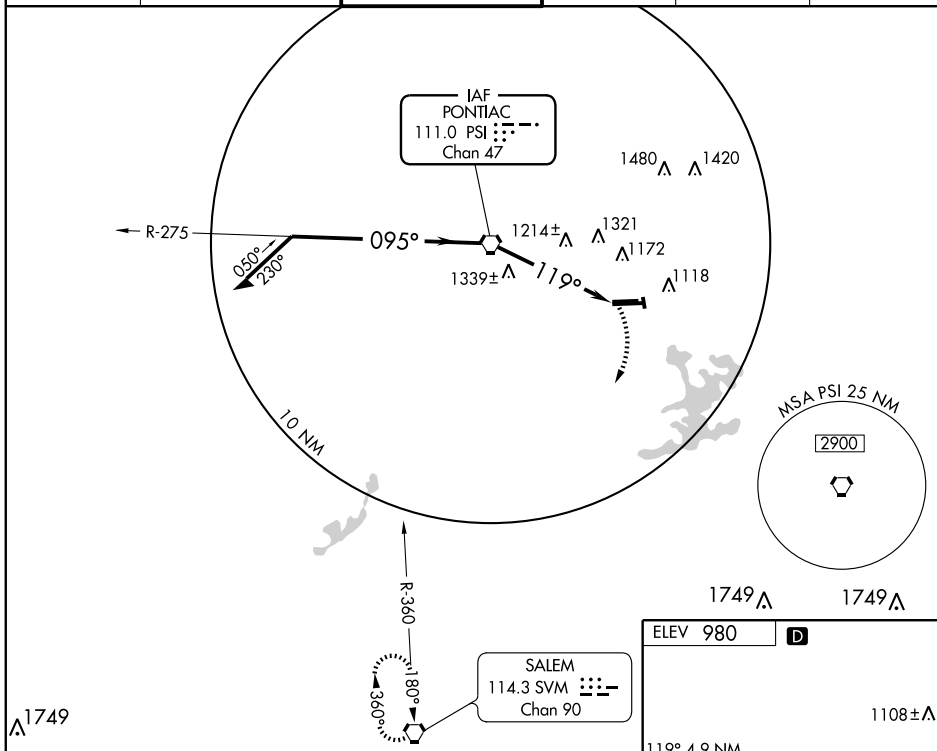


EC-1. 17 DEC 2009 to 14 JAN 2010

VOR RWY 9R
PONTIAC/OAKLAND COUNTY INTL (PTK)

MALSR

MISSED APPROACH:
Climbing right turn to
3000 direct SVM
VORTAC and hold.

UNICOM
122.95 L

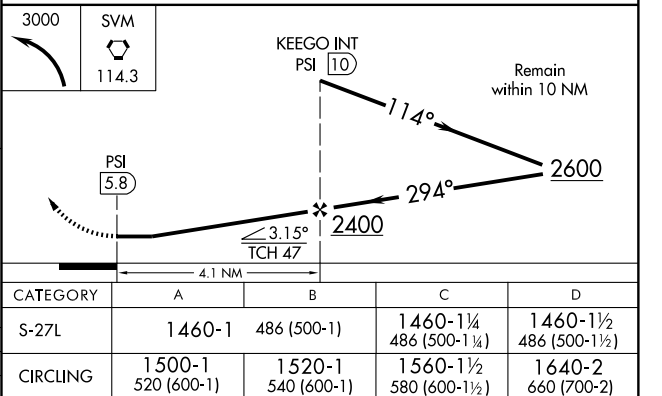
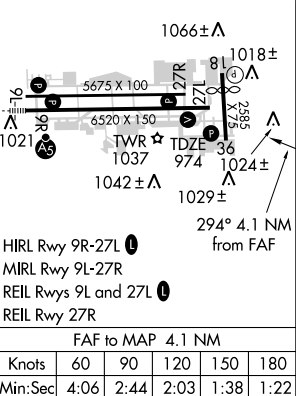
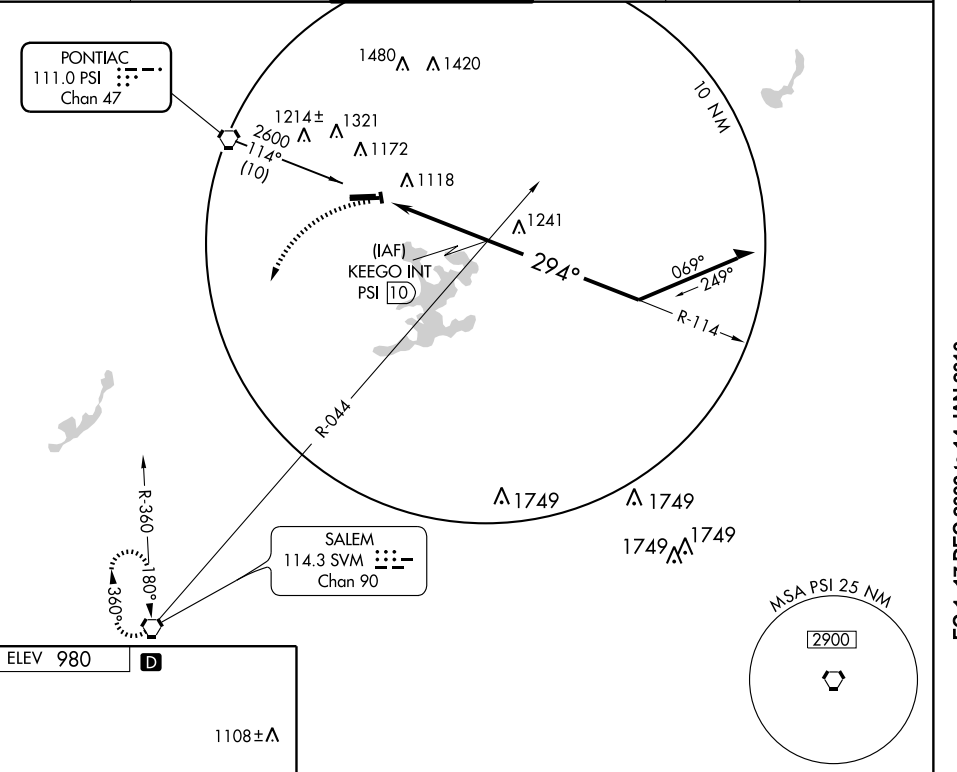
▼

▲

Visibility reduction by helicopters NA. When local altimeter setting not received, use Coleman A. Young Muni altimeter setting and increase all MDA 120 feet, increase S-27L Cat C/D and Circling Cat C/D visibility ½ mile.

MISSED APPROACH: Climbing left turn to 3000 direct SVM VORTAC and hold.

ATIS 125.025	DETROIT APP CON 127.5 363.2	PONTIAC TOWER ★ 120.5 (CTAF) 	GND CON 121.9	CLNC DEL 118.25	UNICOM 122.95 
-----------------	--------------------------------	---	------------------	--------------------	--



EC-1, 17 DEC 2009 to 14 JAN 2010

LOC I-PHN	APP CRS	Rwy Idg	5104
<u>110.9</u>	043°	TDZE	648
		Apt Elev	650

T

A NA

MALSR

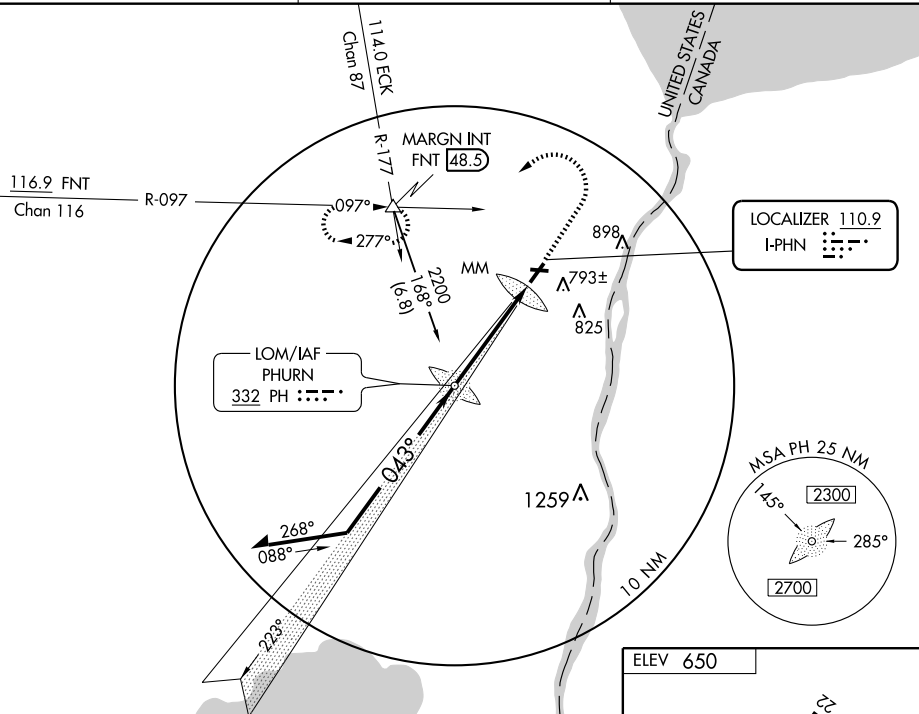


MISSED APPROACH: Climb to 4000 via heading 040° then left turn via FNT VORTAC R-097 to MARGN Int/FNT 48.5 DME and hold.

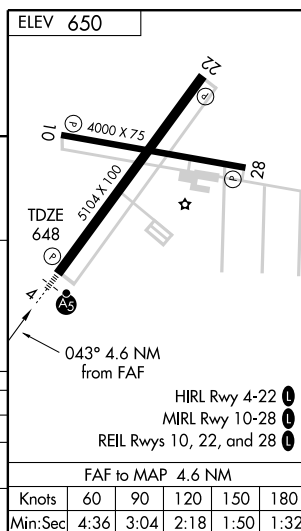
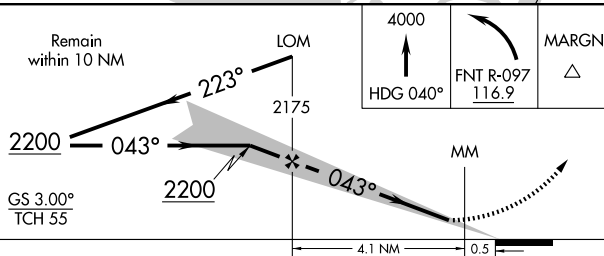
AWOS-3
118.375

SELFRIDGE APP CON ★
119.6 395.9

UNICOM
123.05 (CTAF) **L**



ADF REQUIRED



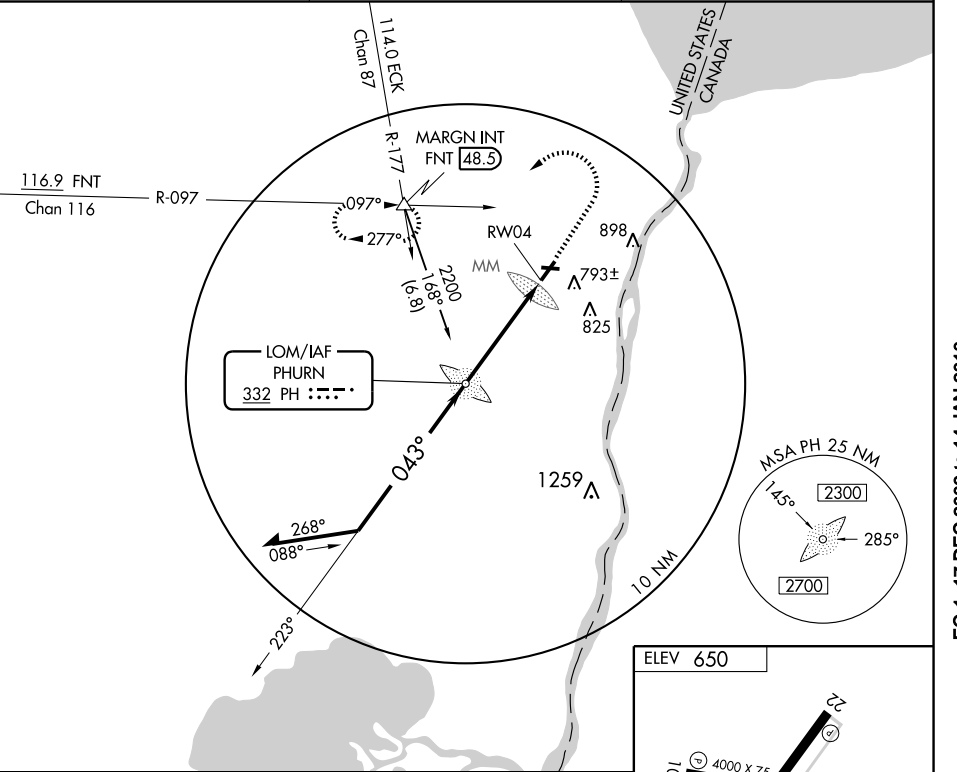
▼

▲ NA

MALSR

MISSED APPROACH: Climb to 4000 via heading 040° then left turn via FNT VORTAC R-097 to MARGN Int/FNT 48.5 DME and hold.

AWOS-3 118.375	SELFDRGE APP CON ★ 119.6 395.9	UNICOM 123.05 (CTAF) 1
--------------------------	--	----------------------------------



Remain within 10 NM

LOM

2200

223°

043°

2200

043°

RW04

4.6 NM

4000

↑

HDG 040°

FNT R-097
116.9

MARGN
△

CATEGORY	A	B	C	D
S-4	1180-3/4 532 (600-3/4)		1180-1 532 (600-1)	1180-1 1/2 530 (600-1 1/2)
CIRCLING	1180-1 530 (600-1)		1180-1 1/2 530 (600-1 1/2)	1200-2 550 (600-2)

ELEV 650

FAF to MAP 4.6 NM

Knots	60	90	120	150	180
Min:Sec	4:36	3:04	2:18	1:50	1:32

VORTAC ECK 114.0 Chan 87	APP CRS 165°	Rwy ldg N/A TDZE N/A Apt Elev 650
--	------------------------	--

VOR/DME or GPS-A

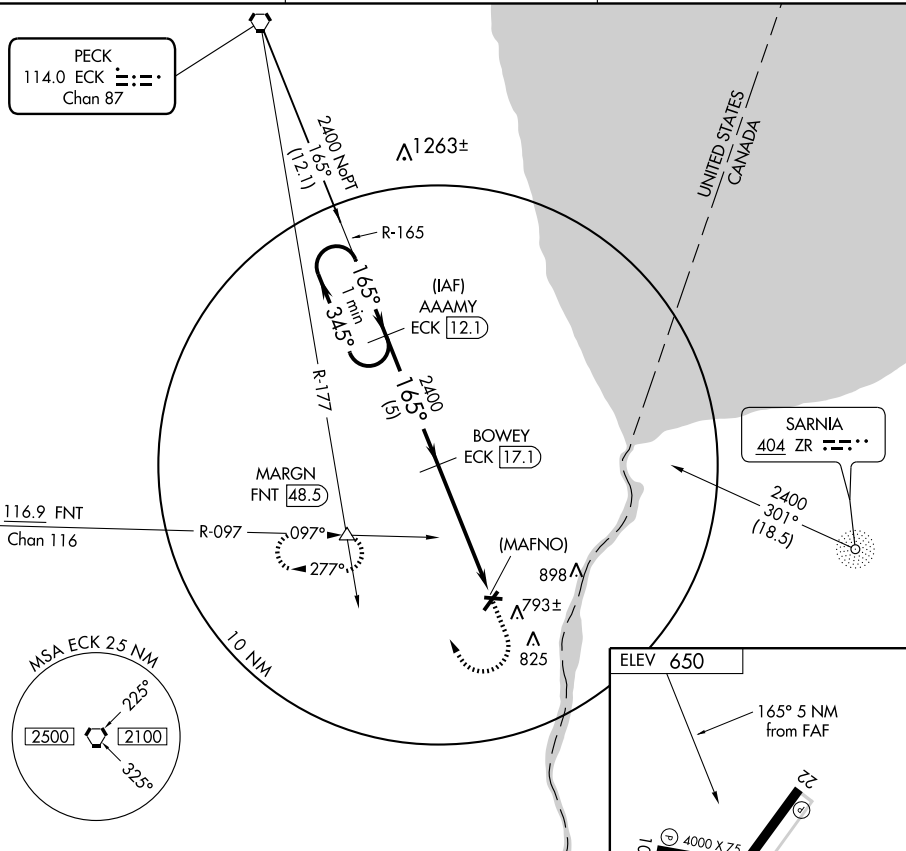
PORT HURON / ST. CLAIR COUNTY INTL (PHN)



MISSED APPROACH: Climb to 4000 via ECK R-165 then right turn heading 340° and FNT VORTAC R-097 to MARGN Int/FNT 48.5 DME and hold.

AWOS-3
118.375

SELFRIDGE APP CON ★
119.6 395.9

UNICOM
123.05 (CTAF) **L**

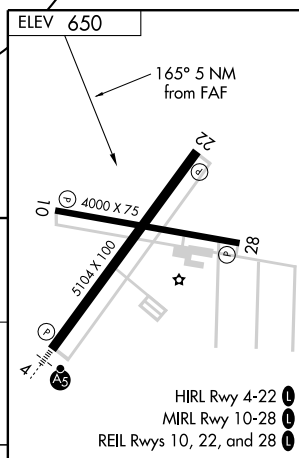
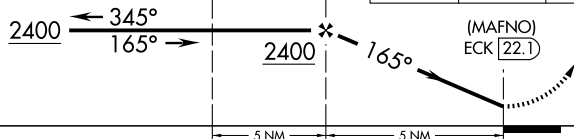
One Minute Holding Pattern

AAAMY
ECK 12.1BOWEY
ECK 17.1

4000
↑
ECK R-16
114.0

HDG 340°
FNT R-097
116.9

MARGN



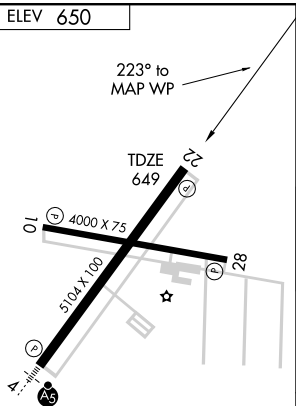
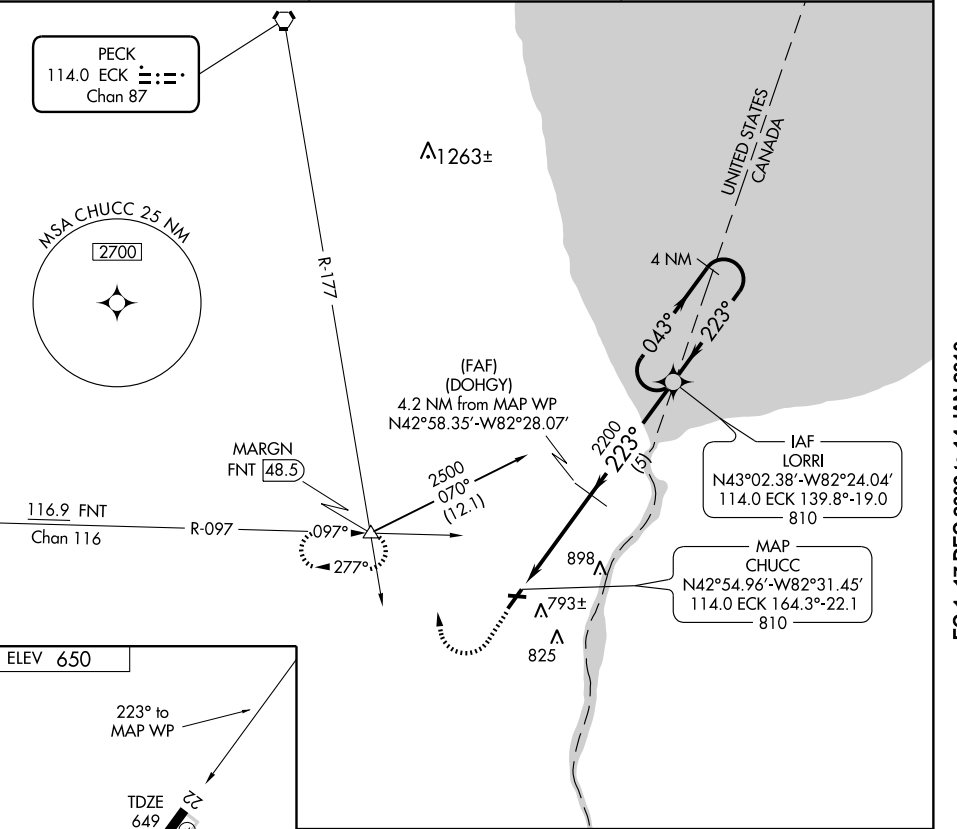
CATEGORY	A	B	C	D						
CIRCLING	1140-1 490 (500-1)	1140-1¼ 490 (500-1¼)	1140-1½ 490 (500-1½)	1200-2 550 (600-2)	Knots	60	90	120	150	180
					Min:Sec					

VORTAC ECK 114.0 Chan 87	APP CRS 223°	Rwy Idg 5104 TDZE 649 Apt Elev 650
--	------------------------	---

NA

MISSED APPROACH: Climb to 4000 via heading 220° then right turn via heading 360° and FNT VORTAC R-097 to MARGN Int/FNT 48.5 DME and hold.

AWOS-3 118.375	SELFRIEDGE APP CON ★ 119.6 395.9	UNICOM 123.05 (CTAF) 0
--------------------------	--	----------------------------------



ELEV 650				
<div><div>HIRL Rwy 4-22 0</div><div>MIRL Rwy 10-28 0</div><div>REIL Rwy 10, 22, and 28 0</div></div>				
<div><div>4000</div><div>↑</div><div>HGD 220°</div><div>HGD 360°</div><div>FNT R-097</div><div>116.9</div><div>MARGN</div><div>△</div><div>(DOHGY)</div><div>4.2 NM from</div><div>MAP WP</div><div>LORRI</div><div>WP</div><div>4 NM</div><div>Holding Pattern</div><div>043°</div><div>223°</div><div>2500</div><div>CHUCC</div><div>MAP WP</div><div>223°</div><div>2200</div><div>4.2 NM</div><div>5 NM</div></div>				
CATEGORY	A	B	C	D
S-22	1220-1 571 (600-1)		1220-1½ 571 (600-1½)	1220-1¾ 571 (600-1¾)
CIRCLING	1220-1 570 (600-1)		1220-1½ 570 (600-1½)	1220-2 570 (600-2)

EC-1, 17 DEC 2009 to 14 JAN 2010

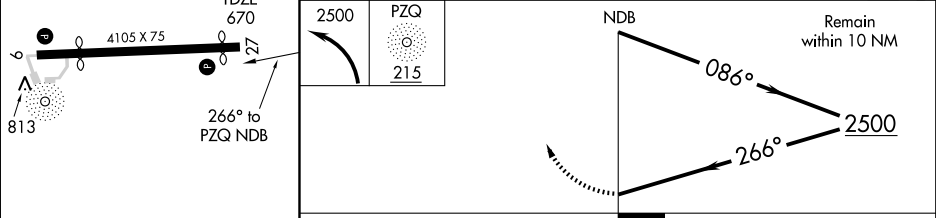
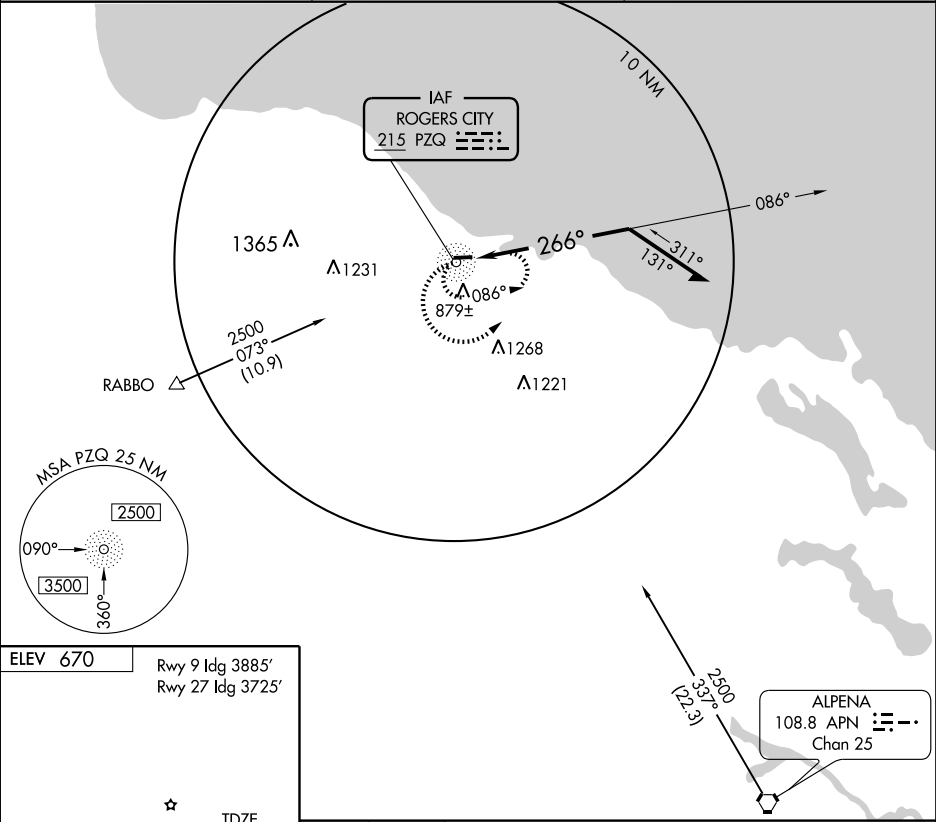
NDB RWY 27

ROGERS CITY / PRESQUE ISLE COUNTY (PZQ)

NDB PZQ	APP CRS	Rwy Idg	3725
215	266°	TDZE	670
		Apt Elev	670

<p>▼ ▲ NA</p>	If local altimeter setting not received, use Alpena County Rgnl altimeter setting and increase all MDAs 60 feet.	MISSED APPROACH: Climbing left turn to 2500 in PZQ NDB holding pattern.
-------------------	---	--

AWOS-3 118.125	ALPENA APP CON ★ 128.425 379.3	CTAF 122.9 0
-------------------	-----------------------------------	-----------------



REIL Rwy 9 and 27 0 MIRL Rwy 9-27 0					
Knots	60	90	120	150	180
Min:Sec					
CATEGORY	A	B	C	D	
S-27	1240-1	570 (600-1)	1240-1½ 570 (600-1½)	NA	
CIRCLING	1240-1	570 (600-1)	1240-1½ 570 (600-1½)	NA	

RNAV (GPS) RWY 9

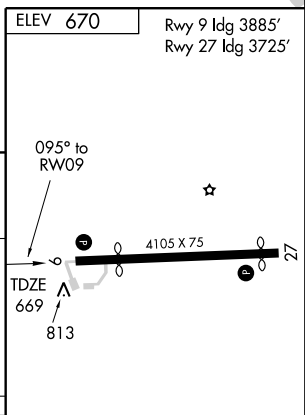
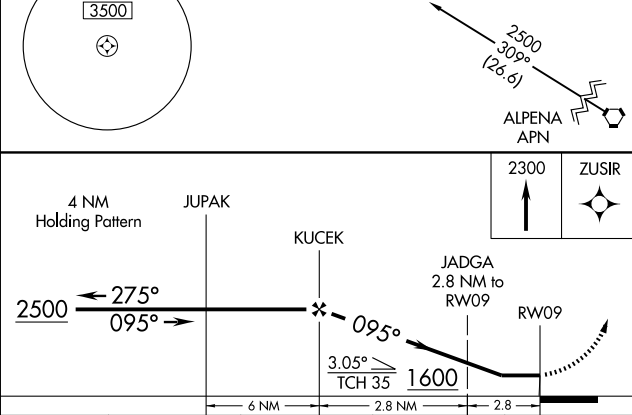
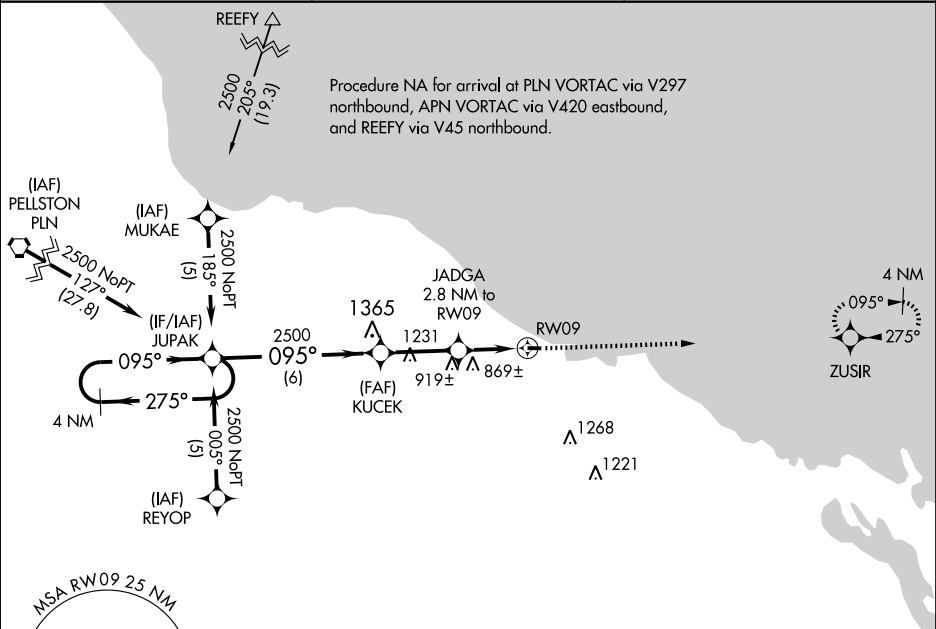
ROGERS CITY / PRESQUE ISLE COUNTY (PZQ)

APP CRS	Rwy Idg	3885
095°	TDZE	669
	Apt Elev	670

DME/DME RNP-0.3 NA. If local altimeter setting not received, use Alpena County Rgnl altimeter setting and increase all MDAs 60 feet. When VGSi inop, straight-in/circling Rwy 9 NA at night.

MISSED APPROACH: Climb to 2300 direct ZUSIR and hold.

AWOS-3 118.125	ALPENA APP CON ★ 128.425 379.3	CTAF 122.9 0
-------------------	-----------------------------------	-----------------



CATEGORY	A	B	C	D
LNNAV MDA	1120-1	451 (500-1)	1120-1 1/4 451 (500-1 1/4)	NA
CIRCLING	1200-1 530 (600-1)	1220-1 550 (600-1)	1220-1 1/2 550 (600-1 1/2)	NA

REIL Rwy 9 and 27 0
MRL Rwy 9-27 0

APP CRS
275°

Rwy Idg	3725
TDZE	670
Apt Elev	670

RNAV (GPS) RWY 27

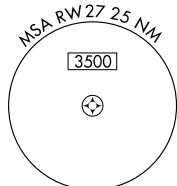
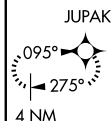
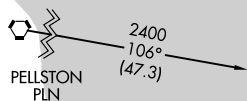
ROGERS CITY / PRESQUE ISLE COUNTY (PZQ)



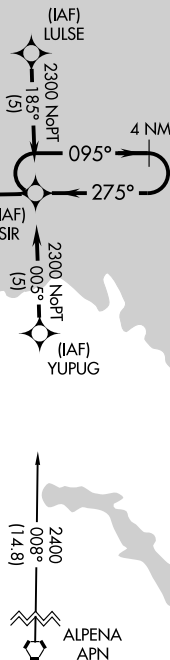
DME/DME RNP-0.3 NA. Circling NA at night to Rwy 9.
If local altimeter setting not received, use Alpena County
Rgnl altimeter setting and increase all MDAs 60 feet.
VDP NA with Alpena County Rgnl altimeter setting.

MISSED APPROACH: Climb to 2500 direct JUPAK and hold.

AWOS-3
118.125

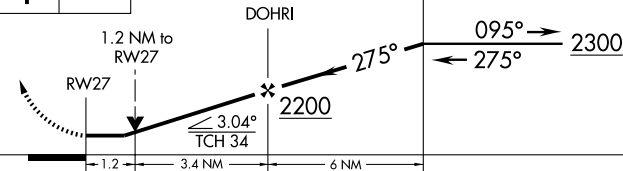
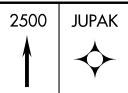
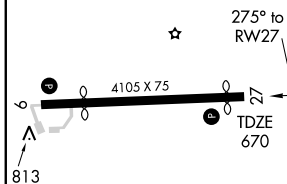
ALPENA APP CON ★
128.425 379.3CTAF
122.9 **L**

Procedure NA for arrival at APN VORTAC via V45 southbound, and PLN VORTAC via V78 northwestbound.



ELEV 670

Rwy 9 Idg 3885'
Rwy 27 Idg 3725'



CATEGORY	A	B	C	D
LNAV MDA	1100-1 430 (500-1)		1100-1½ 430 (500-1½)	NA
CIRCLING	1200-1 530 (600-1)	1220-1 550 (600-1)	1220-1½ 550 (600-1½)	NA

REIL Rwy 9 and 27 **L**MIRL Rwy 9-27 **L**

APP CRS	Rwy Idg	4000
184°	TDZE	739
	Apt Elev	739

RNAV (GPS) RWY 18



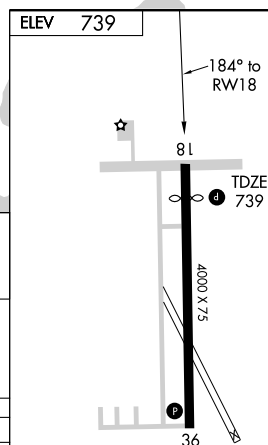
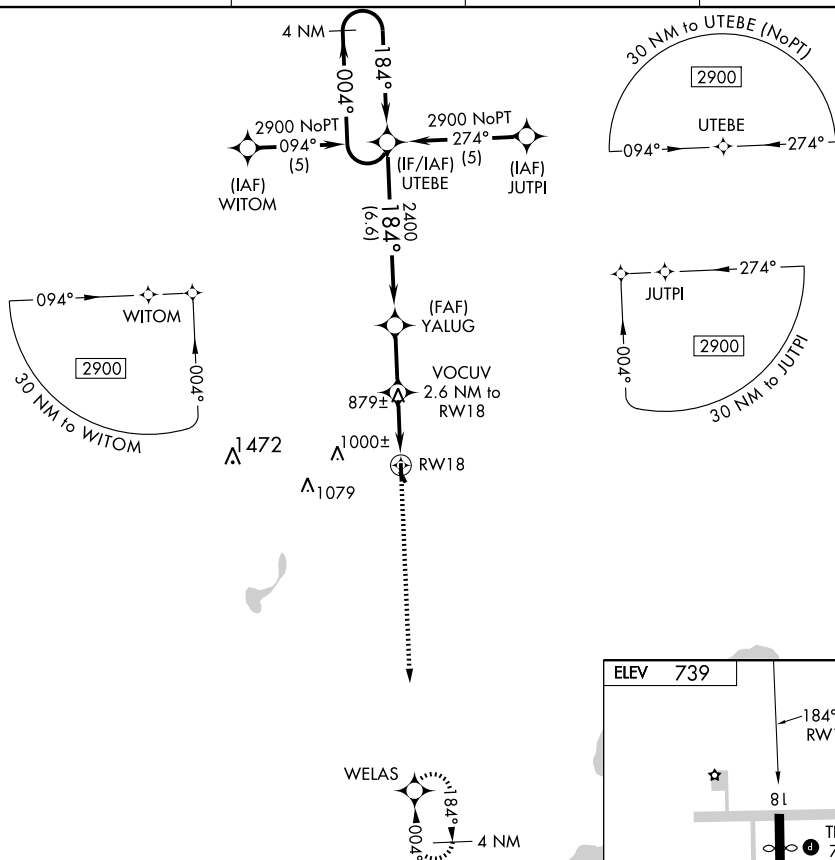
DME/DME RNP-0.3 NA.
Use Coleman A. Young Muni altimeter setting, if not received
use Pontiac altimeter setting and increase all MDA 20 feet.

MISSED APPROACH: Climb to 2900 direct WELAS and hold.

COLEMAN A. YOUNG MUNI ASOS
124.875

SELF RIDGE APP CON ★
119.6 395.9

GCO
121.725

UNICOM
122.8 (CTAF) **L**

CATEGORY	A	B	C	D
LNNAV MDA	1200-1	461 (500-1)	1200-1¼ 461 (500-1¼)	1200-1½ 461 (500-1½)
CIRCLING	1280-1	541 (600-1)	1280-1½ 541 (600-½)	1420-2¼ 681 (700-2¼)

MIRL Rwy 18-36 **L**
REIL Rwy 18 and 36 **L**

▼

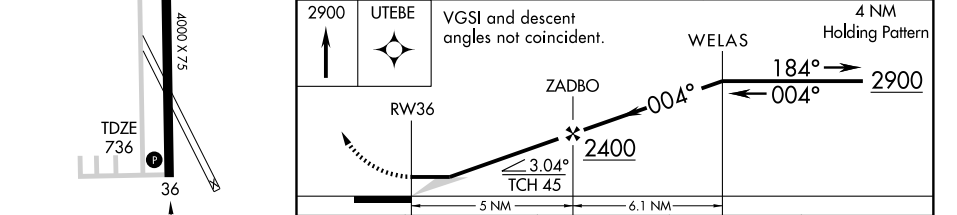
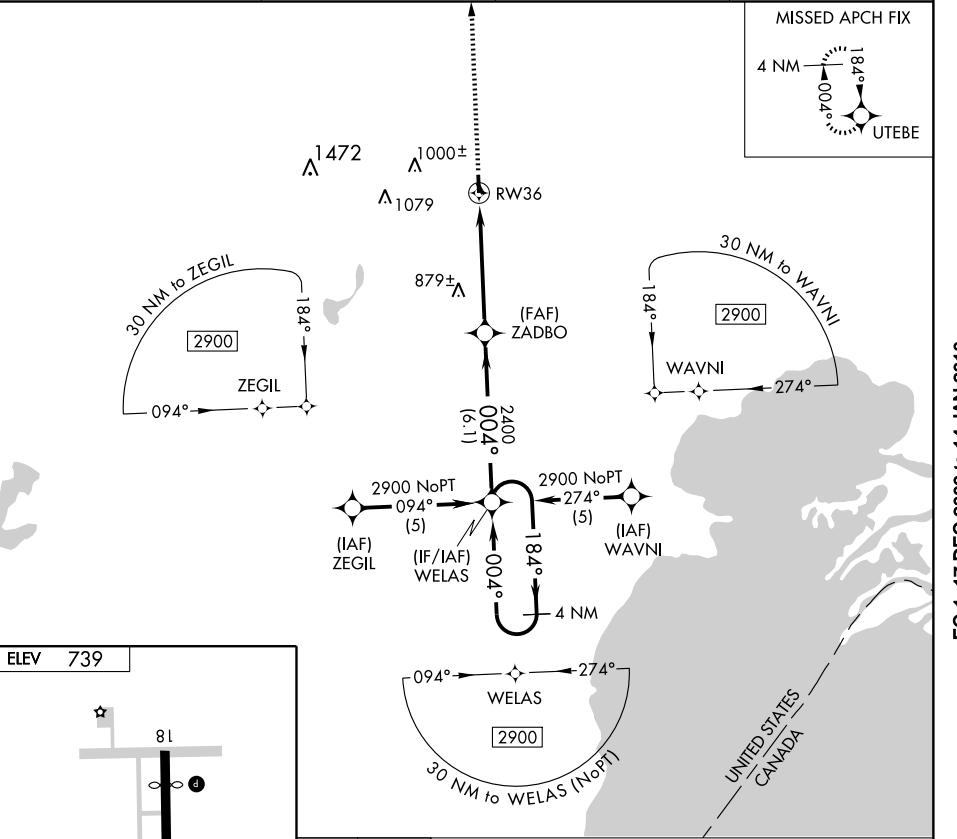
NA

DME/DME RNP-0.3 NA.

Use Coleman A. Young Muni altimeter setting, if not received use Pontiac altimeter setting and increase all MDA 20 feet.

MISSED APPROACH: Climb to 2900 direct UTEBE and hold.

COLEMAN A. YOUNG MUNI ASOS 124.875	SELFREDGE APP CON ★ 119.6 395.9	GCO 121.725	UNICOM 122.8 (CTAF) 0
---------------------------------------	------------------------------------	----------------	--------------------------



CATEGORY	A	B	C	D
LNAV MDA	1200-1 464 (500-1)	1200-1½ 464 (500-1½)	1200-1½ 464 (500-1½)	1200-1½ 464 (500-1½)
CIRCLING	1280-1 541 (600-1)	1280-1½ 541 (600-1½)	1420-2¼ 681 (700-2¼)	1420-2¼ 681 (700-2¼)

MIRL Rwy 18-36 0

REIL Rwy 18 and 36 0

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON

127.5 239.275

WILLOW RUN ATIS 127.425

PONTIAC ATIS 125.025

COLEMAN A. YOUNG ATIS 124.875

WINDSOR ATIS 134.5

SELFREDGE ATIS 125.325 270.1

SPRTN

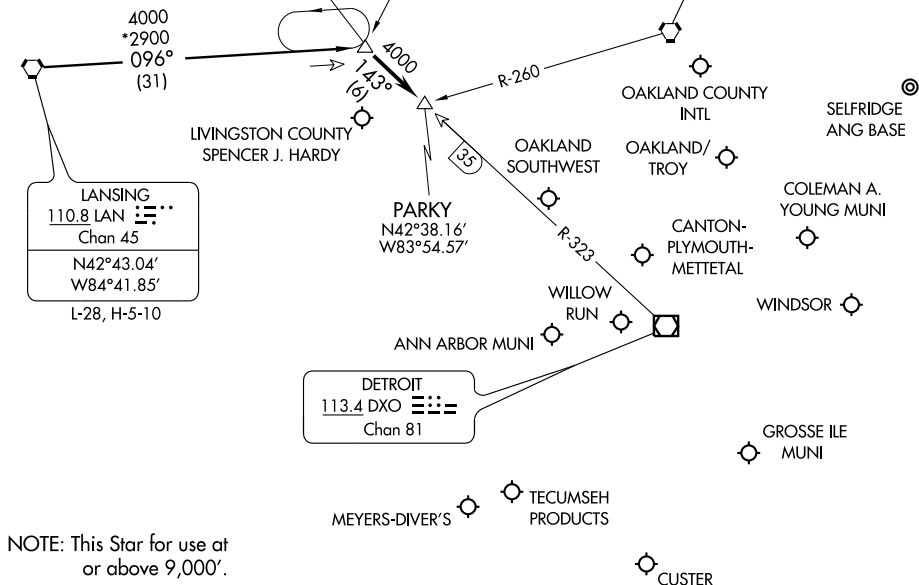
N42°42.52'-W84°00.23'

VERTICAL NAVIGATION

PLANNING INFORMATION

TURBOJETS/TURBOPROPS:

Expect clearance to cross at 9000'.



LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence

. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ,

1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence

. . . . Expect radar vectors to final approach course.

VORTAC PSI 111.0 Chan 47	APP CRS 080°	Rwy Idg TDZE Apt Elev	N/A N/A 739
--	------------------------	-----------------------------	--

VOR/DME-A
ROMEO STATE (D98)

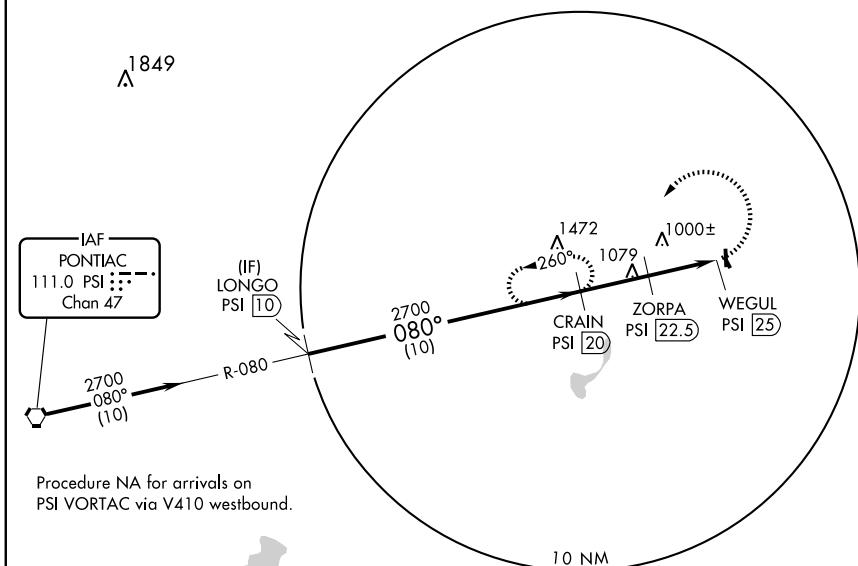
T Use Coleman A. Young Muni altimeter setting, if not received
A NA use Pontiac altimeter setting and increase all MDA 20 feet.

MISSED APPROACH: Climbing left turn to 2700 via heading 190° and PSI VORTAC R-080 to CRAIN/20 DME and hold.

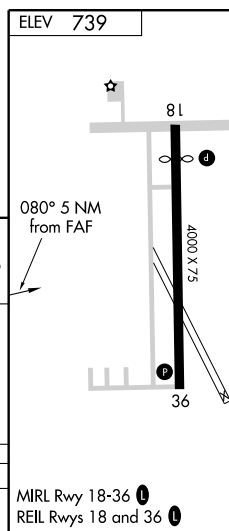
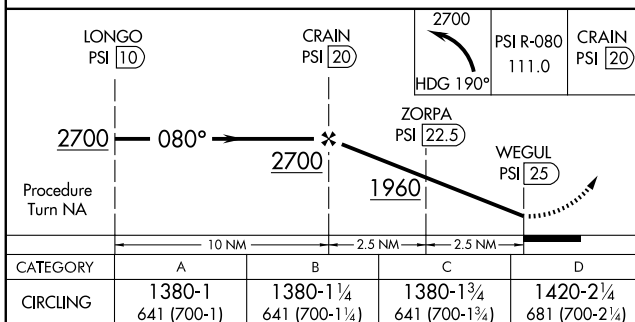
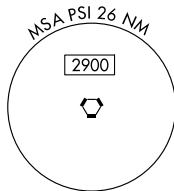
COLEMAN A. YOUNG MUNI ASOS
124.875

SELFRIIDGE APP CON★
119.6 395.9


GCO
121.725

UNICOM
122.8 (CTAF) **L**

Procedure NA for arrivals on
PSI VORTAC via V410 westbound.



ILS or LOC/DME RWY 27
SAGINAW COUNTY H. W. BROWNE (HYX)

<p>ALSR</p> 	<p>MISSED APPROACH: Climb to 1200 then climbing right turn to 4000 direct MBS VOR/DME and hold, continue climb-in-hold to 4000.</p>
---	---

MALSR

MISSED APPROACH: Climb to 1200 then climbing right turn to 4000 direct MBS VOR/DME and hold, continue climb-in-hold to 4000.

AWOS-3
118.325

SAGINAW APP CON ★
120.95 235.625

GCO
121.725

UNICOM
122.8 (CTAF) **L**[illegible]

EC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 601

1200 4000 MBS 112.9

I-HQW 1.9

EHEMU I-HQW 5.8

IVODY I-HQW 11.8

One Minute Holding Pattern

2200 27.4° 094° 3100

GS 3.00° TCH 45

VGSI and ILS glidepath not coincident.

CATEGORY	A	B	C	D
S-ILS 27	800-½ 200 (200-½)			NA
S-LOC 27	900-½ 300 (300-½)			NA
CIRCLING	1100-1	499 (500-1)	1100-1½ 499 (500-1½)	NA

REIL Rwy 9 **L**
MIRL Rwy 5-23 and 9-27 **L**

WAAS CH 50200 W09A	APP CRS 094°	Rwy Idg TDZE Apt Elev	5000 600 601
--	------------------------	-----------------------------	---

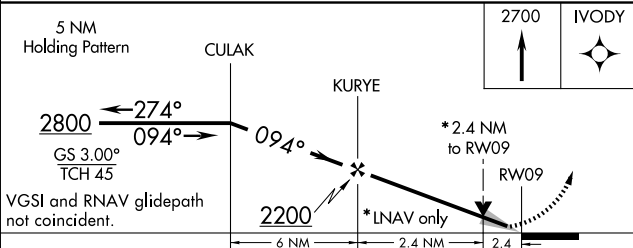
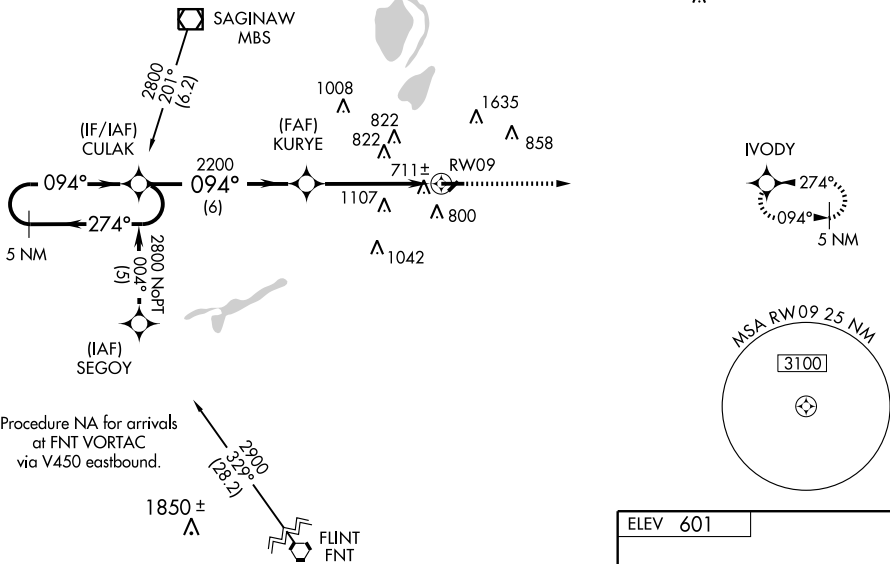
RNAV (GPS) RWY 9
SAGINAW COUNTY H. W. BROWNE (HYX)

▼
▲ Circling to Rwy 5 NA at night. When local altimeter setting not received, use Saginaw MBS Intl altimeter setting and increase all DA 36 feet, increase LPV and LNAV/VNAV all Cats visibility ¼ mile, increase all MDA 40 feet, increase LNAV visibility Cat C ¼ mile and Circling visibility Cat C ¼ mile. VDP and Baro-VNAV NA when using Saginaw MBS Intl altimeter setting. For uncompensated Baro-VNAV system, procedure NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.

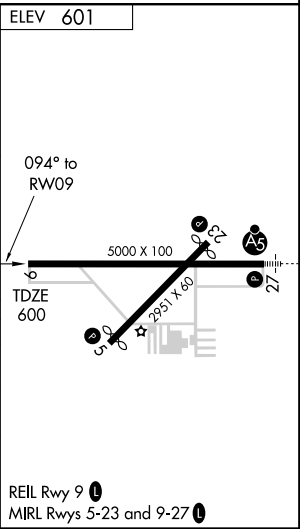
MISSED APPROACH:
Climb to 2700 direct
IVODY and hold.

AWOS-3 118.325	SAGINAW APP CON ★ 120.95 235.625	GCO 121.725	UNICOM 122.8 (CTAF) ①
--------------------------	--	-----------------------	--

Procedure NA for arrivals
at MBS VOR/DME
on airway radials 163 CW 259.



CATEGORY	A	B	C	D
LPV DA	850-3/4	250 (300-3/4)		NA
LNAV/VNAV DA	1095-1 1/4	495 (500-1 1/4)		NA
LNAV MDA	1380-1 780 (800-1)	1380-1 1/4 780 (800-1 1/4)	1380-2 1/4 780 (800-2 1/4)	NA
CIRCLING	1380-1 779 (800-1)	1380-1 1/4 779 (800-1 1/4)	1380-2 1/4 779 (800-2 1/4)	NA



WAAS CH 90200 W27A	APP CRS 274°	Rwy Idg TDZE Apt Elev	5000 600 601
--	------------------------	-----------------------------	---

▼

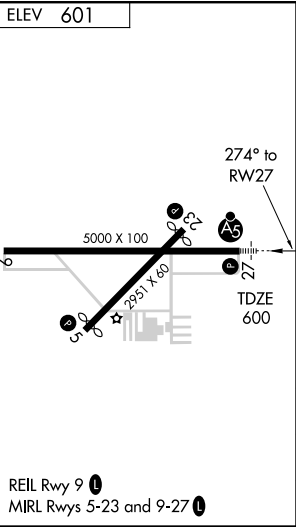
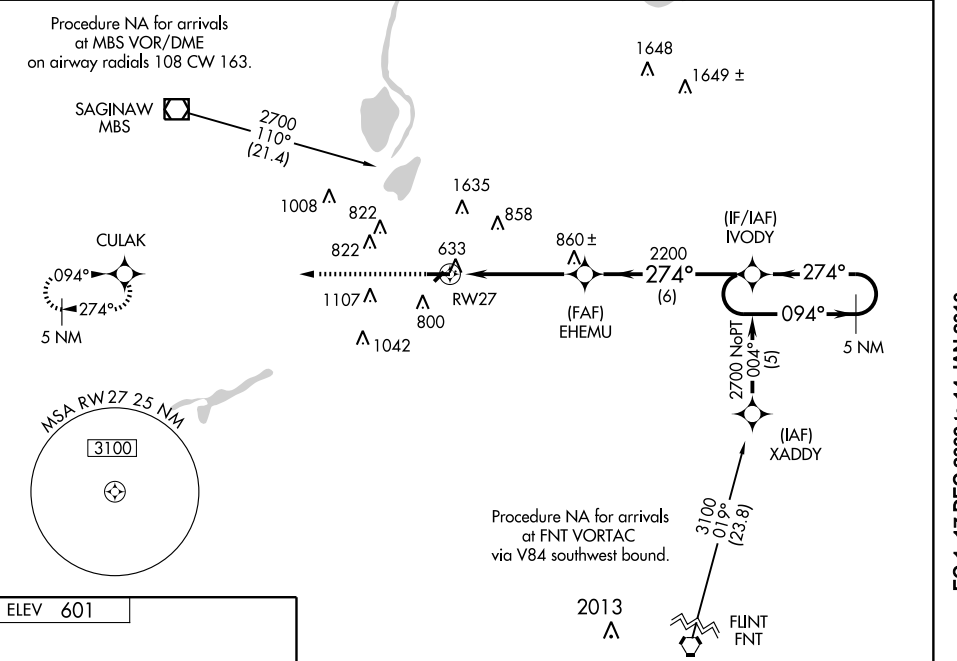
▲

When local altimeter setting not received, use Saginaw MBS Intl altimeter setting and increase all DA 36 feet. Increase LNAV/VNAV all Cats visibility $\frac{1}{4}$, increase all MDA 40 feet. Baro-VNAV and VDP NA when using Saginaw MBS Intl altimeter setting. For uncompensated Baro-VNAV system. Procedure NA below -16°C (4°F) or above 54°C (130°F). For inoperative MALSR increase LPV visibility to 1 all Cats. DME/DME RNP-0.3 NA.

MALSR

MISSED APPROACH:
Climb to 2800 direct CULAK and hold.

AWOS-3 118.325	SAGINAW APP CON ★ 120.95 235.625	GCO 121.725	UNICOM 122.8 (CTAF)
--------------------------	--	-----------------------	-------------------------------



2800

↑

CULAK

✱

5 NM

Holding Pattern

IVODY

094° →

← 274°

2700

GS 3.00°

TCH 45°

VGSI and RNAV glidepath not coincident.

EHEMU

274°

2200

* 1.3 NM to RW27

RW27

* LNAV only

1.3

3.5 NM

6 NM

CATEGORY	A	B	C	D
LPV DA	850-½	250 (300-½)		NA
LNAV/VNAV DA	903-½	303 (400-½)		NA
LNAV MDA	1040-½	440 (500-½)	1040-¾ 440 (500-¾)	NA
CIRCLING	1100-1	499 (500-1)	1100-1½ 499 (500-1½)	NA

EC-1, 17 DEC 2009 to 14 JAN 2010

SAGINAW COUNTY H. W. BROWNE (HYX)

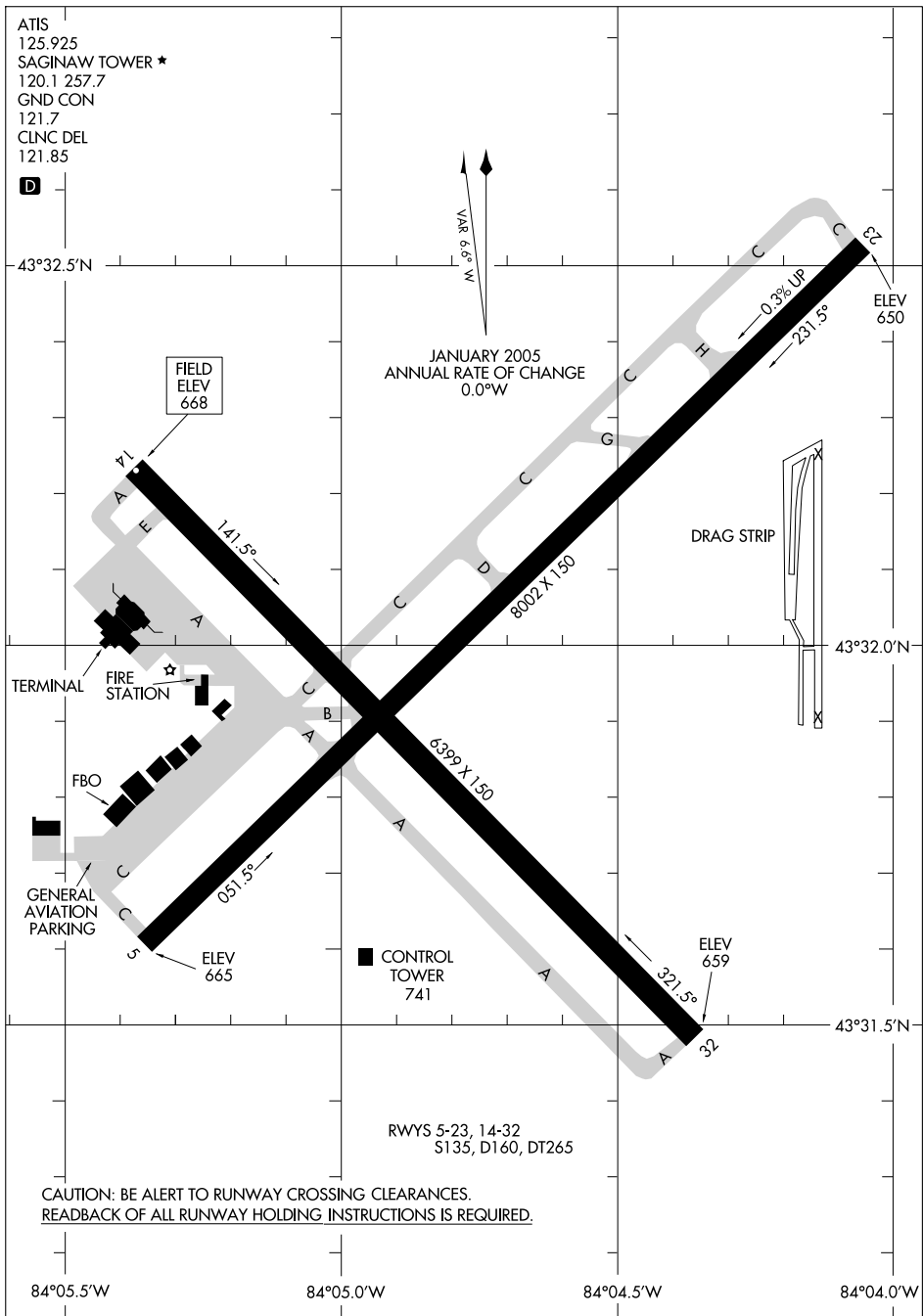
MISSED APPROACH: Climb to 1900, then climbing right turn to 3000 direct MBS VOR/DME and hold.

UNICOM
122.8 (CTAF) **L** $\Delta 1850 \pm$

REIL Rwy 9 **L**
MIRL Rwy 5-23 and 9-27 **L**


AIRPORT DIAGRAM

AL-648 (FAA)

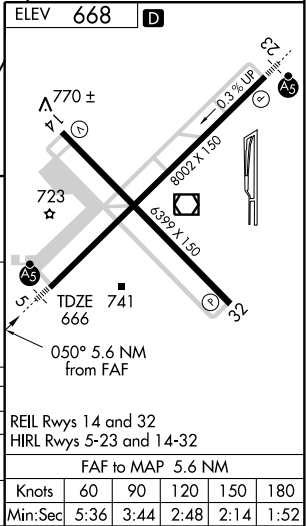
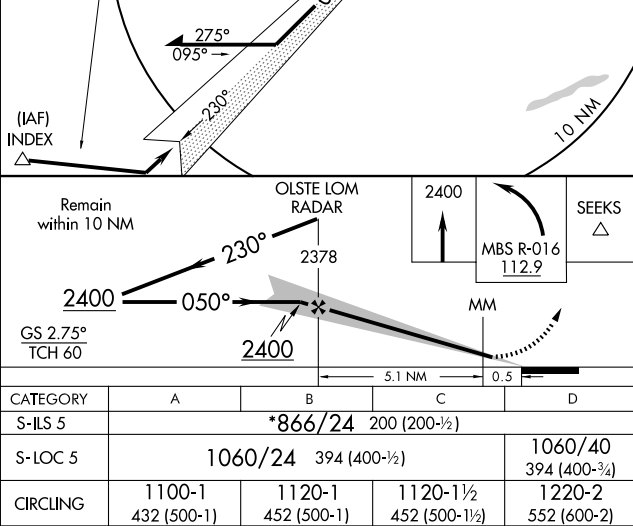
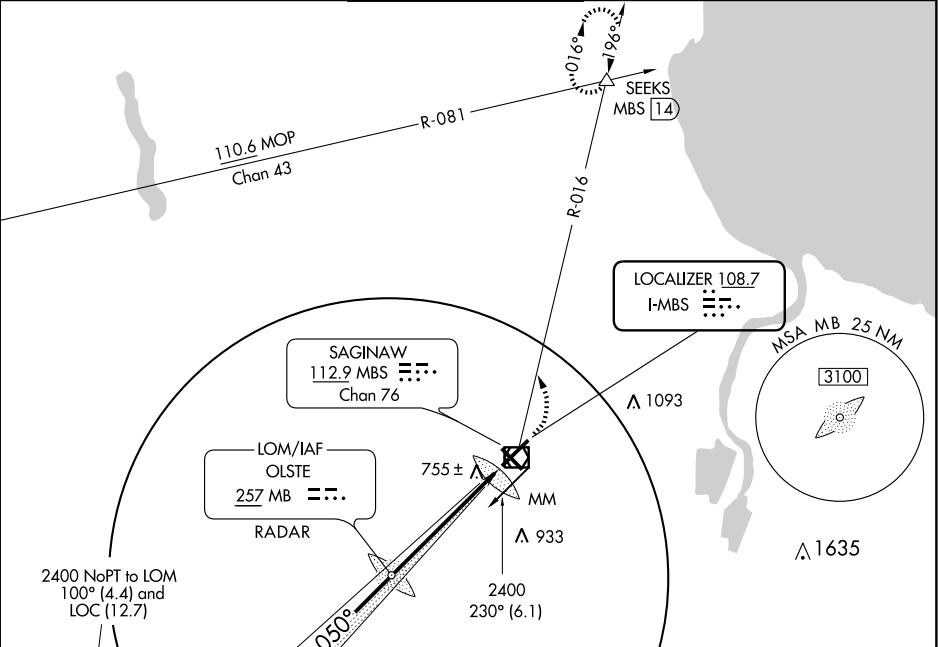
SAGINAW / MBS INTL (MBS)
SAGINAW, MICHIGAN

LOC I-MBS	APP CRS	Rwy Idg	8002
108.7	050°	TDZE	666
		Apt Elev	668

ILS or LOC RWY 5
SAGINAW/MBS INTL (MBS)

⚠ CAT D S-LOC visibility increased to RVR 5000 for inoperative MM. When control tower closed, activate MALSR Rwy 23 and SSALR Rwy 5 - CTAF. ⚠ ASR * RVR 1800 authorized with the use of FD or AP or HUD to DA.	MALSR 	MISSED APPROACH: Climb to 2400 then left turn via MBS R-016 to SEEKS Int/14 DME and hold.
---	---	--

ATIS 125.925	SAGINAW APP CON ★ 050°-229° 120.95 235.625 230°-049° 126.45 235.625	SAGINAW TOWER ★ 120.1 (CTAF) 257.7	GND CON 121.7	CLNC DEL 121.85	UNICOM 122.95
------------------------	---	--	-------------------------	---------------------------	-------------------------



CATEGORY	A	B	C	D
S-ILS 5		*866/24	200 (200-½)	
S-LOC 5		1060/24	394 (400-¾)	1060/40 394 (400-¾)
CIRCLING	1100-1 432 (500-1)	1120-1 452 (500-1)	1120-1½ 452 (500-1½)	1220-2 552 (600-2)

REIL Rwy 14 and 32	
HIRL Rwy 5-23 and 14-32	
FAF to MAP 5.6 NM	
Knots	60 90 120 150 180
Min:Sec	5:36 3:44 2:48 2:14 1:52

LOC I-TQR 108.7	APP CRS 230°	Rwy Idg TDZE Apt Elev	8002 661 668
---------------------------	------------------------	-----------------------------	---

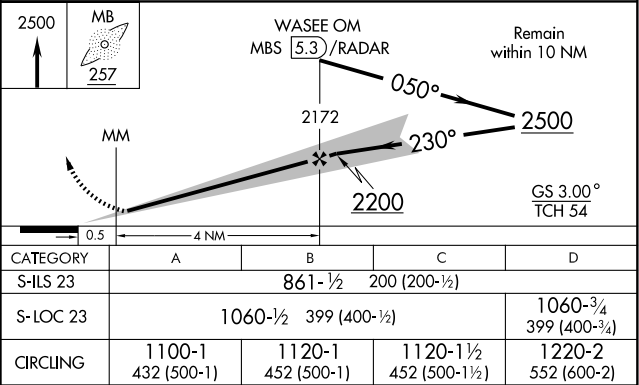
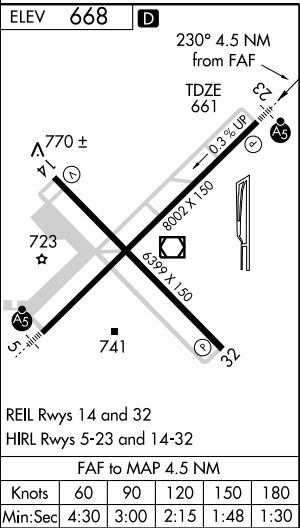
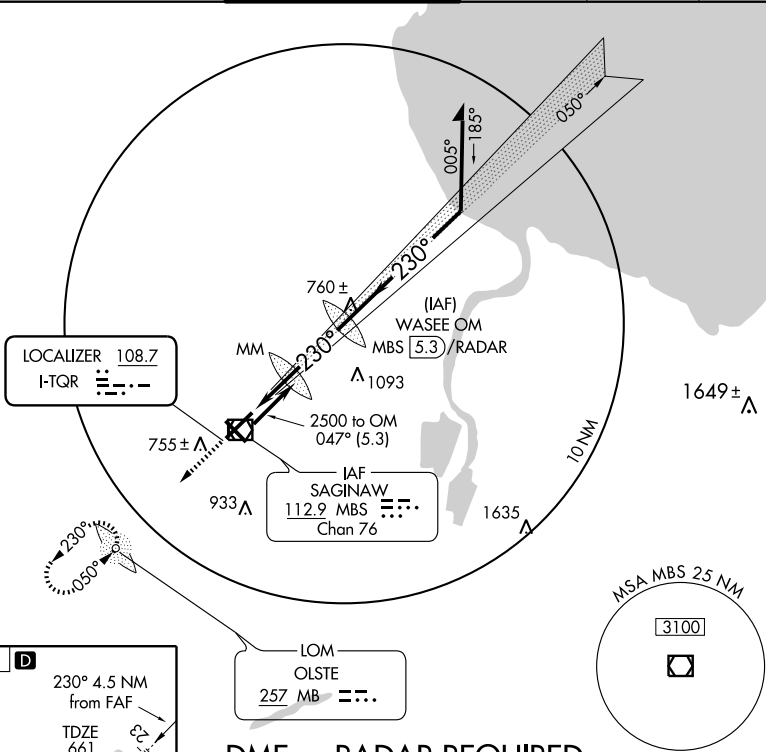
ILS RWY 23
SAGINAW/MBS INTL (MBS)

⚠ Cat. D S-LOC visibility increased ¼ mile for inoperative MM. When control tower closed, ASR
ACTIVATE MALSR Rwy 23 and SSALR Rwy 5-CTAF.



MISSED APPROACH: Climb to 2500 direct OLSTE LOM and hold.

ATIS 125.925	SAGINAW APP CON ★ 050°-229° 120.95 235.625 230°-049° 126.45 235.625	SAGINAW TOWER ★ 120.1 (CTAF) 0 257.7	GND CON 121.7	CLNC DEL 121.85	UNICOM 122.95
------------------------	---	---	-------------------------	---------------------------	-------------------------



WAAS	APP CRS	Rwy Idg	8002
CH 82010	050°	TDZE	666
W05A		Apt Elev	668

RNAV (GPS) RWY 5

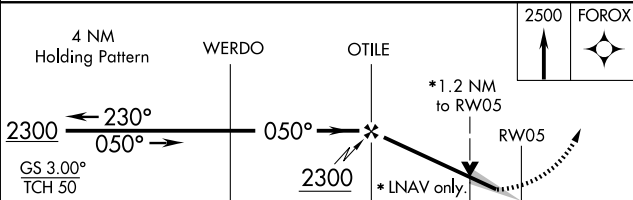
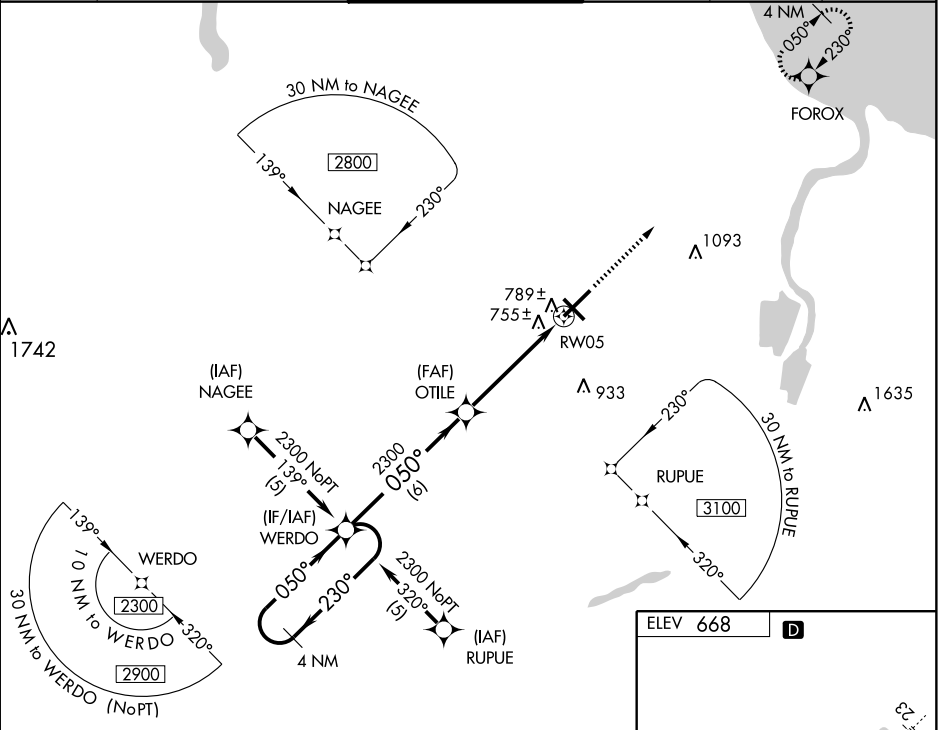
SAGINAW/ MBS INTL (MBS)

When local altimeter setting not received, use Saginaw County H. W. Browne altimeter setting and increase all DA 36 feet and all MDA 40 feet, increase LNAV/VNAV all Cats visibility to RVR 5000. For inoperative MALSR, increase LNAV Cat D visibility to RVR 6000. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP- 0.3 NA. Baro-VNAV and VDP NA when using Saginaw County H. W. Browne altimeter setting.

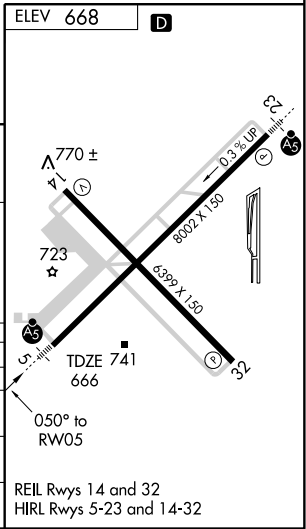


MISSED APPROACH:
Climb to 2500 direct
FOROX and hold.

ATIS	SAGINAW APP CON★	SAGINAW TOWER ★	GND CON	CLNC DEL	UNICOM
125.925	050°-229° 120.95 230°-049° 126.45	235.625 235.625 120.1 (CTAF) 0 257.7	121.7	121.85	122.95



CATEGORY	A	B	C	D
LPV DA	866/24		200 (200-½)	
LNAV/VNAV DA	1059/40		393 (400-¾)	
LNAV MDA	1080/24 414 (500-½)		1080/40 414 (500-¾)	1080/50 414 (500-1)
CIRCLING	1100-1 432 (500-1)	1120-1 452 (500-1)	1120-1½ 452 (500-1½)	1220-2 552 (600-2)



WAAS CH 69211 W14A	APP CRS 140°	Rwy Idg TDZE Apt Elev 6399 668 668
--	------------------------	--

RNAV (GPS) RWY 14

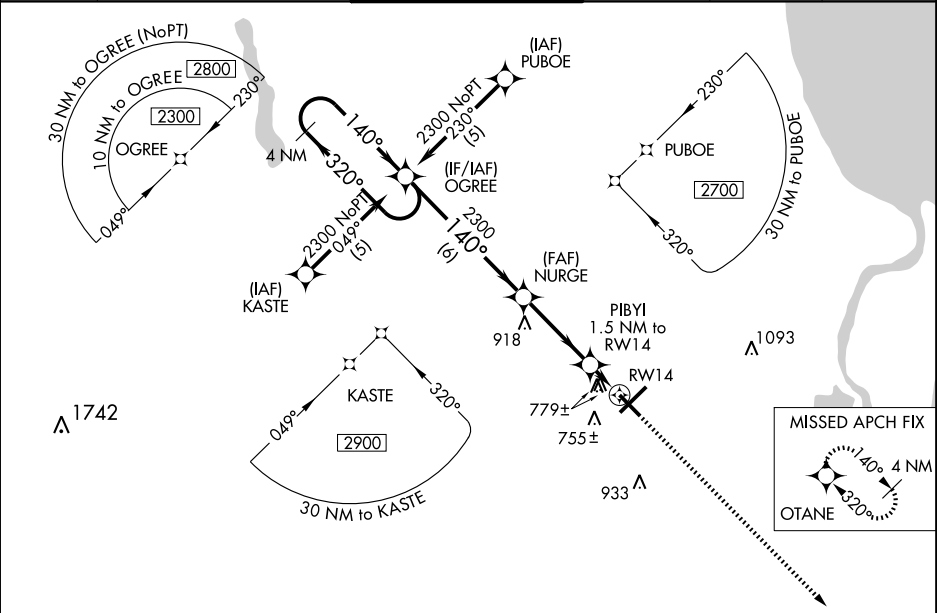
SAGINAW/ MBS INTL (MBS)

Baro-VNAV NA when using Saginaw County H. W. Browne altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). When local altimeter setting not received, use Saginaw County H. W. Browne altimeter setting and increase all DA 36 feet and all MDA 40 feet, increase LNAV Cat. C visibility ¼ mile. DME/DME RNP -0.3 NA.

ASR

MISSED APPROACH: Climb to 2700 direct OTANE and hold.

ATIS 125.925	SAGINAW APP CON ★ 050°-229° 120.95 235.625 230°-049° 126.45 235.625	SAGINAW TOWER ★ 120.1 (CTAF) 0 257.7	GND CON 121.7	CLNC DEL 121.85	UNICOM 122.95
------------------------	---	--	-------------------------	---------------------------	-------------------------



4 NM Holding Pattern

OGREE NURGE PIBYI 1.5 NM to RW14

2300 320° 140° 2300 1160* RW14

GS 3.00° TCH 42

6 NM 3.4 NM 1.5 NM

ELEV 668 D

140° to RW14

770 ±

TDZE 668

723

8002 X 150

6399 X 150

741

32

CATEGORY	A	B	C	D
LPV DA	1004-1¼ 336 (400-1¼)			
LNAV/VNAV DA	1079-1½ 411 (500-1½)			
LNAV MDA	1040-1 372 (400-1)			1040-1¼ 372 (400-1¼)
CIRCLING	1100-1 432 (500-1)	1120-1 452 (500-1)	1120-1½ 452 (500-1½)	1220-2 552 (600-2)

REIL Rwy 14 and 32
HIRL Rwy 5-23 and 14-32

WAAS CH 49010 W23A	APP CRS 230°	Rwy Idg TDZE Apt Elev	8002 661 668
--	------------------------	-----------------------------	---

RNAV (GPS) RWY 23

SAGINAW/ MBS INTL (MBS)

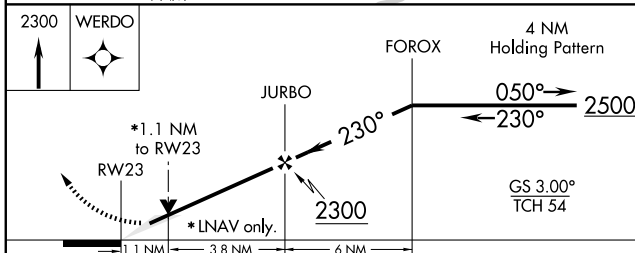
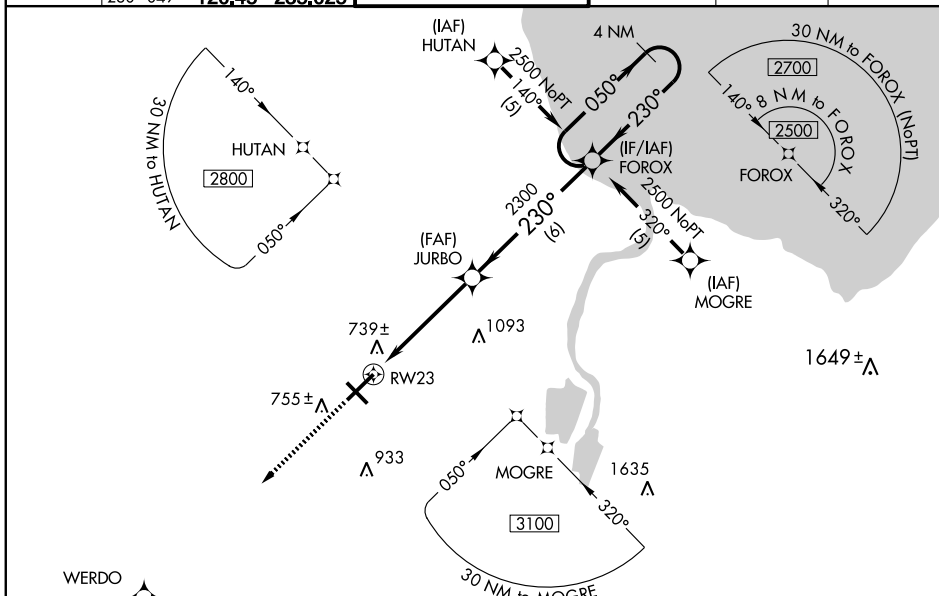
T When local altimeter setting not received, use Saginaw County H. W. Browne altimeter setting and increase all DA 36 feet and all MDA 40 feet, increase LNAV/VNAV all Cats visibility $\frac{1}{4}$ mile, LNAV Cat C visibility $\frac{1}{4}$ mile. Baro-VNAV and VDP NA when using Saginaw County H. W. Browne altimeter setting. For inoperative MALSR, increase LNAV Cat D visibility to $\frac{1}{4}$. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP- 0.3 NA.

MALSFR

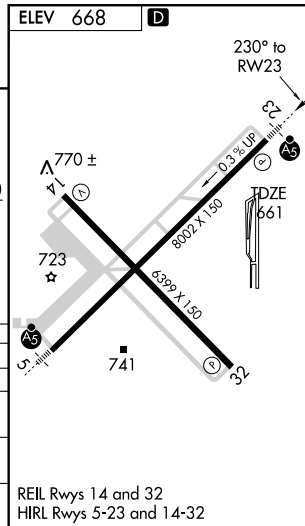


MISSED APPROACH:
Climb to 2300 direct
WERDO and hold.

ATIS	SAGINAW APP CON *		SAGINAW TOWER *	GND CON	CLNC DEL	UNICOM
125.925	050°-229°	120.95 235.625	120.1 (CTAF) 0 257.7	121.7	121.85	122.95
	230°-049°	126.45 235.625				



CATEGORY		A	B	C	D
LPV	DA	861- $\frac{1}{2}$ 200 (200- $\frac{1}{2}$)			
LNNAV/ VNAV	DA	1034- $\frac{3}{4}$ 373 (400- $\frac{3}{4}$)			
LNNAV	MDA	1060- $\frac{1}{2}$ 399 (400- $\frac{1}{2}$)			1060-1 399 (400-1)
CIRCLING		1100-1 432 (500-1)	1120-1 452 (500-1)	1120-1 $\frac{1}{2}$ 452 (500-1 $\frac{1}{2}$)	1220-2 552 (600-2)



WAAS CH 78011 W32A	APP CRS 320°	Rwy Idg TDZE Apt Elev	6399 665 668
--	------------------------	-----------------------------	---

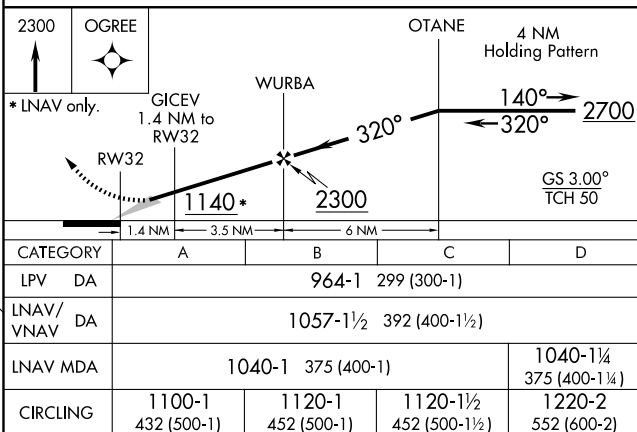
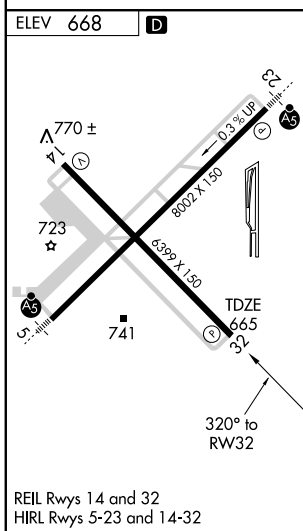
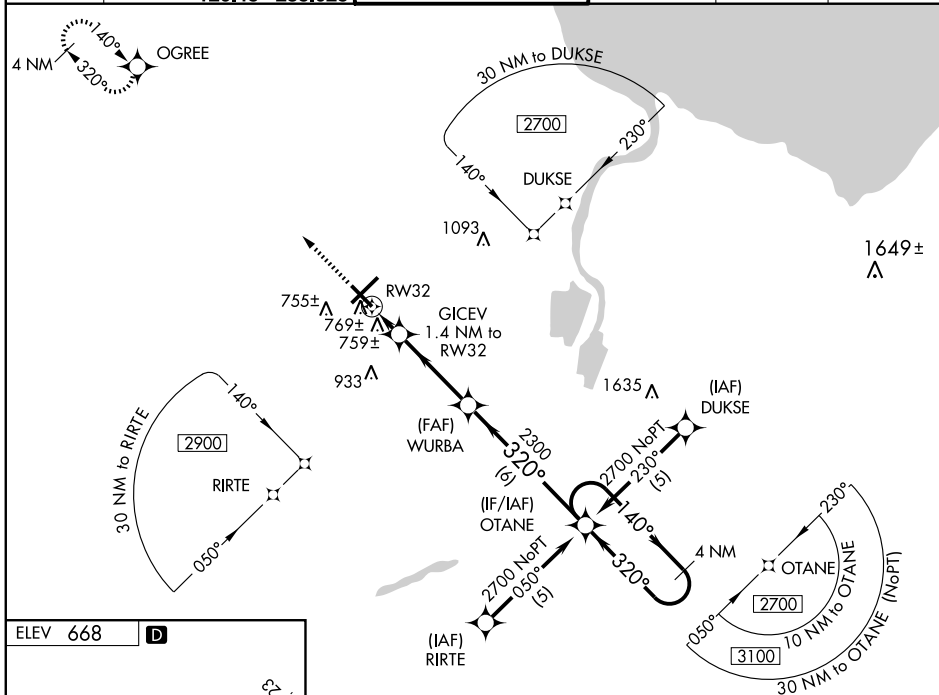
RNAV (GPS) RWY 32

SAGINAW/ MBS INTL (MBS)

▼ Baro-Vnav NA when using Saginaw County H. W. Browne altimeter setting. For uncompensated Baro-Vnav systems, LNAV/VNAV NA below -16°C (4°F) or above 47° (116°F). When local altimeter setting not received, use Saginaw County H. W. Browne altimeter setting and increase all DA 36 feet and all MDA 40 feet, increase LPV all Cats. visibility and LNAV Cat. C visibility ¼ mile. DME/DME RNP- 0.3 NA.

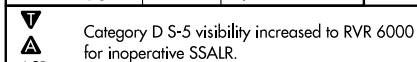
MISSED APPROACH: Climb to 2300 direct OGREY and hold.

ATIS 125.925	SAGINAW APP CON ★ 050°-229° 120.95 235.625 230°-049° 126.45 235.625	SAGINAW TOWER ★ 120.1 (CTAF) 0 257.7	GND CON 121.7	CLNC DEL 121.85	UNICOM 122.95
------------------------	---	--	-------------------------	---------------------------	-------------------------



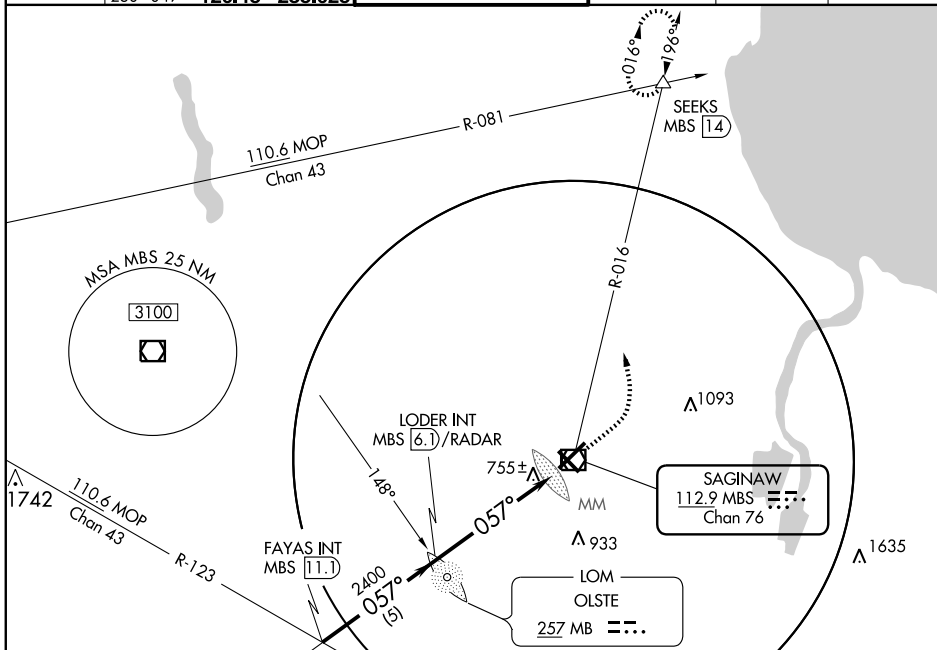
VOR/DME MBS 112.9 Chan 76	APP CRS 057°	Rwy Idg 8002 TDZE 666 Apt Elev 668
---	------------------------	---

VOR RWY 5
SAGINAW/MBS INTL (MBS)

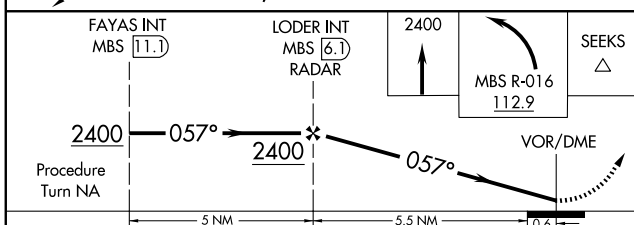


MISSED APPROACH: Climb to 2400 then left turn via MBS R-016 to Seek's Int/14 DME and hold.

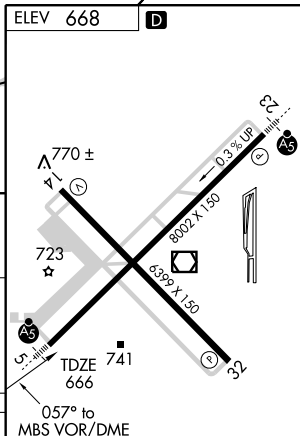
ASR	SAGINAW APP CON ★		SAGINAW TOWER ★	GND CON	CLNC DEL	UNICOM
ATIS 125.925	050°-229° 230°-049°	120.95 235.625 126.45 235.625	120.1 (CTAF) 0 257.7	121.7	121.85	122.95



DME, ADF or RADAR REQUIRED



CATEGORY	A	B	C	D
S-5	1060/24 394 (400-½)			1060/50 394 (400-1)
CIRCLING	1100-1 432 (500-1)	1120-1 452 (500-1)	1120-1 ½ 452 (500-1 ½)	1220-2 552 (600-2)



REIL Rwy 14 and 32
HIRL Rwy 5-23 and 14-32

VOR/DME MBS 112.9 Chan 76	APP CRS 131°	Rwy Idg TDZE Apt Elev	6399 668 668
---	------------------------	-----------------------------	---

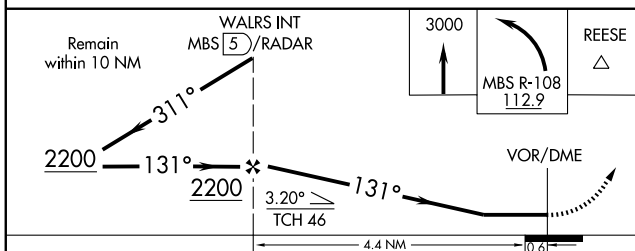
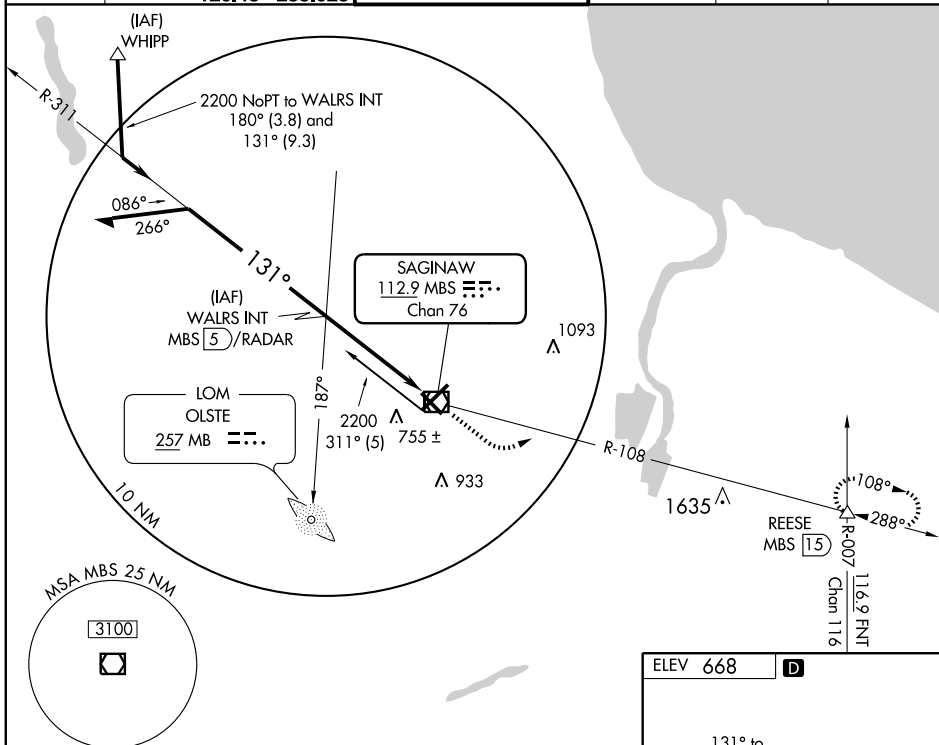
VOR RWY 14

SAGINAW/MBS INTL (MBS)

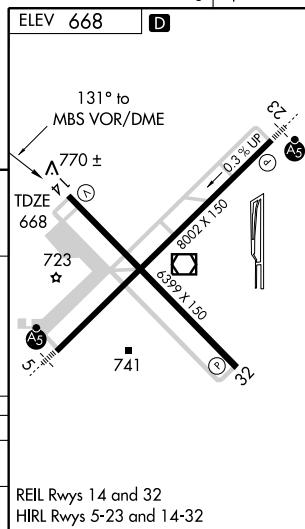
ASR
Air carrier landing visibility reduction below $\frac{3}{4}$ mile for local conditions NA.

MISSED APPROACH: Climb to 3000 then left turn via MBS R-108 to REESE Int/15 DME and hold.

ATIS 125.925	SAGINAW APP CON ★ 050°-229° 120.95 235.625 230°-049° 126.45 235.625	SAGINAW TOWER ★ 120.1 (CTAF) 257.7	GND CON 121.7	CLNC DEL 121.85	UNICOM 122.95
------------------------	---	---	-------------------------	---------------------------	-------------------------



CATEGORY	A	B	C	D
S-14	1040-1	372 (400-1)		1040-1½ 372 (400-1½)
CIRCLING	1100-1 432 (500-1)	1120-1 452 (500-1)	1120-1½ 452 (500-1½)	1220-2 552 (600-2)



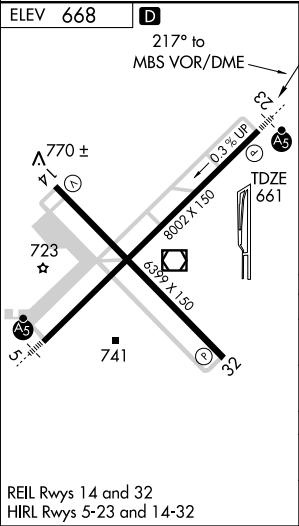
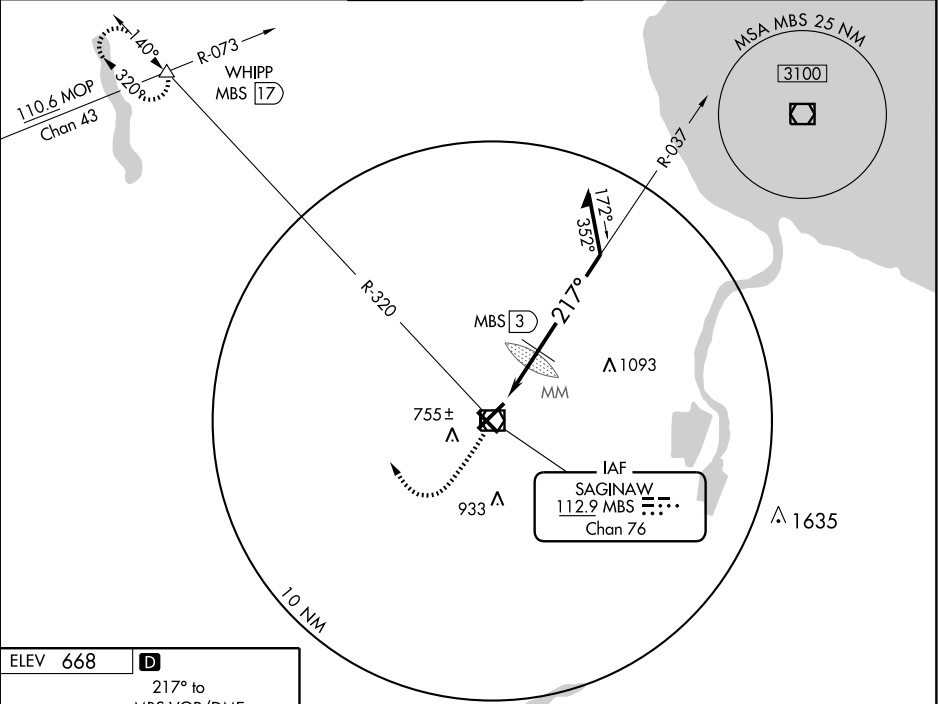
REIL Rwy 14 and 32
HIRL Rwy 5-23 and 14-32

VOR/DME MBS	APP CRS	Rwy Idg	8002
112.9	217°	TDZE	661
Chan 76		Apt Elev	668

VOR RWY 23
SAGINAW/MBS INTL (MBS)

 Cat. D S-23 DME minimums visibility increased ¼ mile for inoperative MALSR.	 MISSED APPROACH: Climb to 1100 then climbing right turn to 2600 via MBS R-320 to WHIPP Int/17 DME and hold.
---	---

ATIS 125.925	SAGINAW APP CON★ 050°-229° 120.95 235.625 230°-049° 126.45 235.625	SAGINAW TOWER★ 120.1(CTAF) 257.7	GND CON 121.7	CLNC DEL 121.85	UNICOM 122.95
-----------------	--	-------------------------------------	------------------	--------------------	------------------



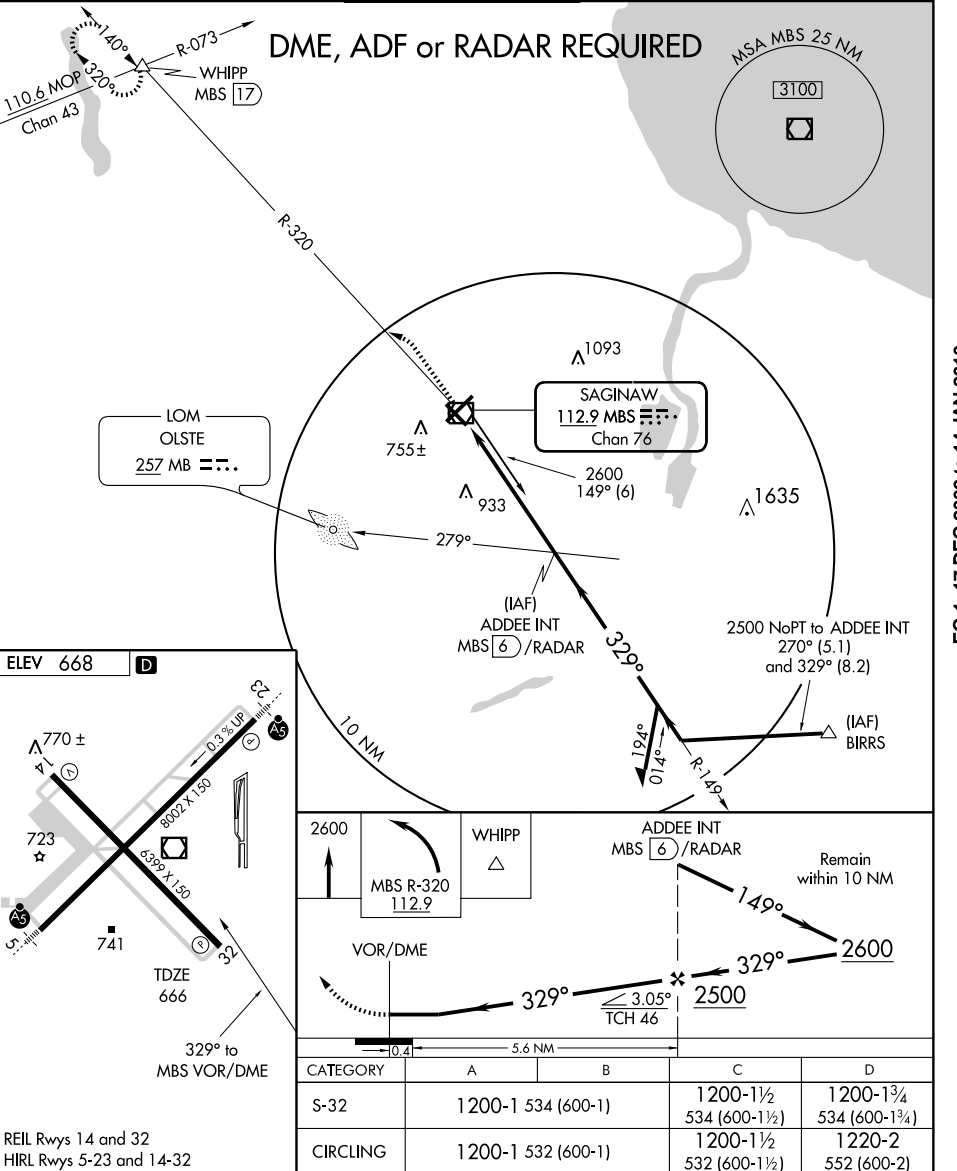
<div>1100 ↑</div>		<div>2600 ↗</div> <div>MBS R-320 112.9</div>	<div>WHIPP △</div>	<div>VOR/DME</div> <div>037°</div> <div>217°</div> <div>2200</div> <div>1220</div> <div>3</div> <div>0.8 2.2 NM</div>		<div>Remain within 10 NM</div>
CATEGORY	A		B		C	D
S- 23	1220-½		559 (600-½)		1220-1 559 (600-1)	1220-1¼ 559 (600-1¼)
CIRCLING	1220-1		552 (600-1)		1220-1½ 552 (600-1½)	1220-2 552 (600-2)
DME MINIMA						
S- 23	1020-½		359 (400-½)		1020-1 359 (400-1)	
CIRCLING	1100-1 432 (500-1)	1120-1 452 (500-1)	1120-1½ 452 (500-1½)	1220-2 552 (600-2)		

▼

ASR

MISSED APPROACH: Climb to 2600 then left turn via MBS R-320 to WHIPP Int/17 DME and hold.

ATIS 125.925	SAGINAW APP CON ★ 050°-229° 120.95 235.625 230°-049° 126.45 235.625	SAGINAW TOWER ★ 120.1 (CTAF) 257.7	GND CON 121.7	CLNC DEL 121.85	UNICOM 122.95
-----------------	---	---------------------------------------	------------------	--------------------	------------------



ASOS

118.375

TORONTO CENTER

132.65 344.5

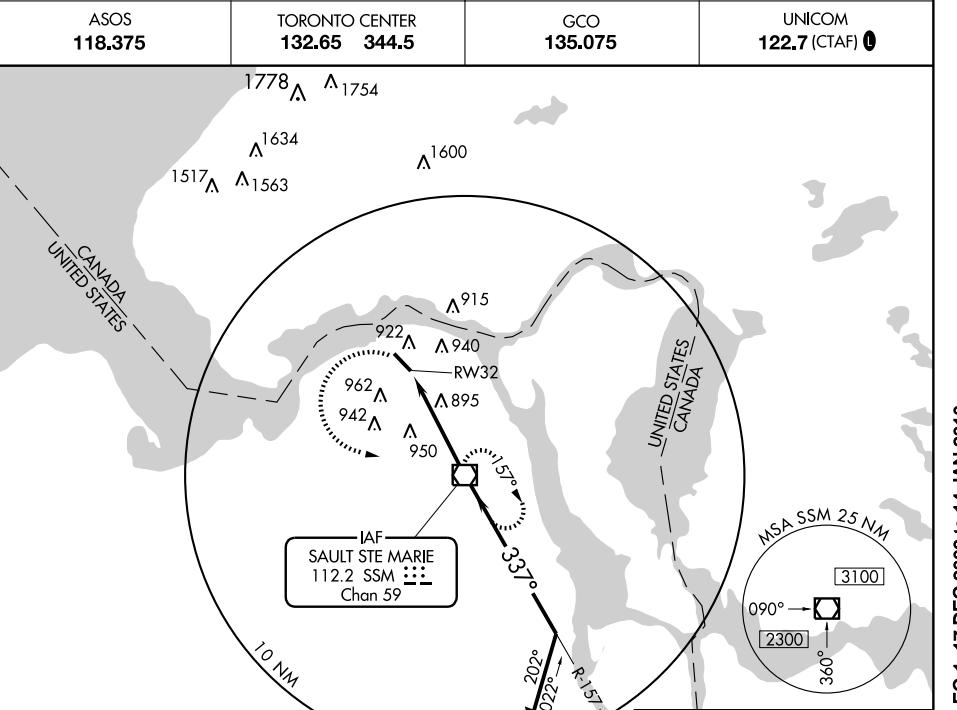
GCO

135.075

UNICOM

122.7 (CTAF) 0

MISSED APPROACH: Climbing left turn to 2400 direct SSM VOR/DME and hold.



ELEV 716

Rwy 14 Idg 5054'

Rwy 32 Idg 5056'

922

2400

SSM

112.2

RW32

SSM 4.2

VOR/DME

157°

337°

2400

2000

4.2 NM

Remain within 10 NM

00-4% UP

5235 x 100

TDZE 716

337° 4.2 NM from FAF

MIRL Rwy 14-32

REIL Rws 14 and 32

FAF to MAP 4.2 NM

Knots	60	90	120	150	180
Min:Sec	4:12	2:48	2:06	1:41	1:24

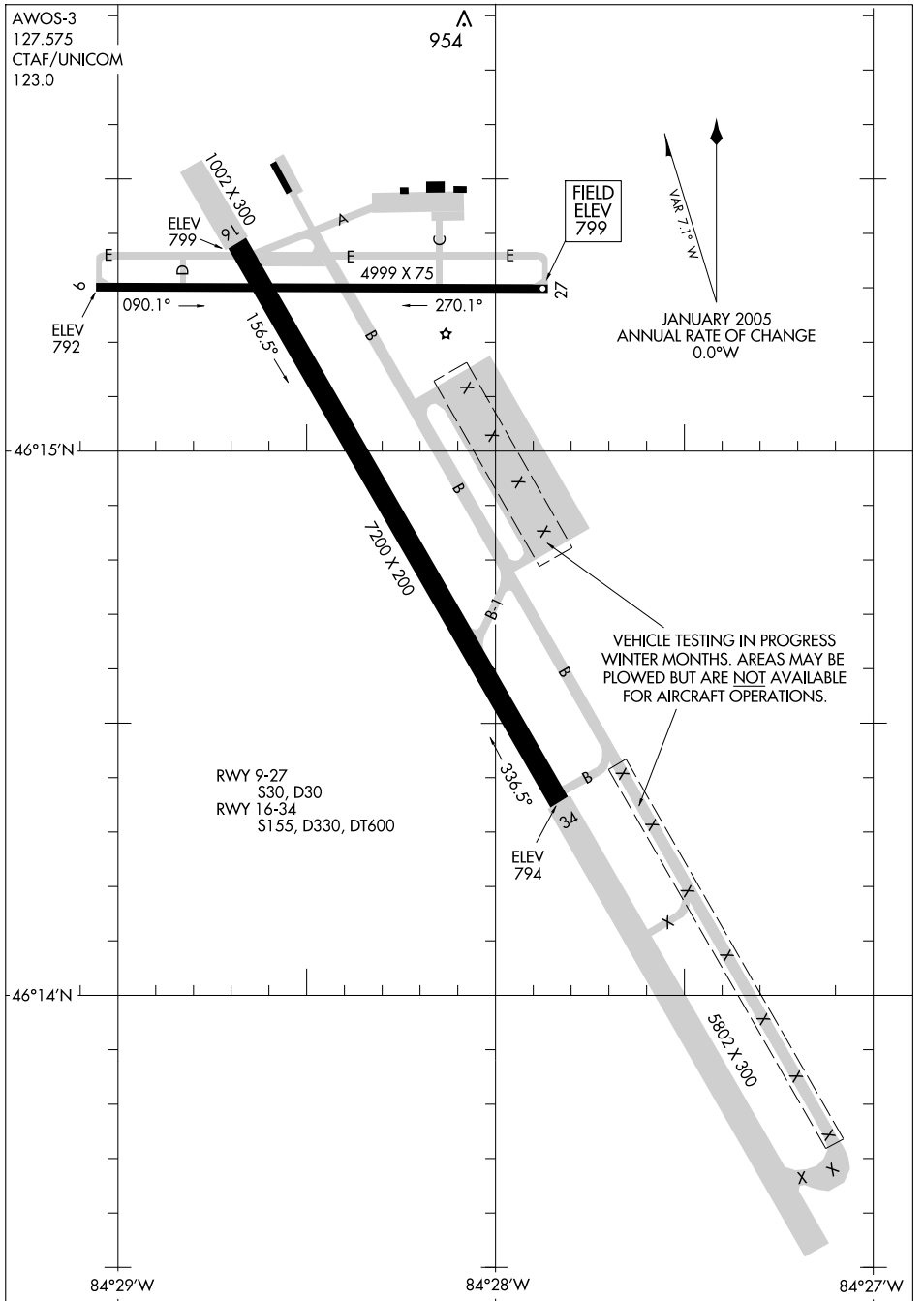
CATEGORY	A	B	C	D
S-32	1200-1	484 (500-1)	NA	
CIRCLING	1280-1 564 (600-1)	1300-1 584 (600-1)	NA	

AIRPORT DIAGRAM

AL-810 (FAA)

SAULT STE MARIE/CHIPPEWA COUNTY INTL (CIU)
SAULT STE MARIE, MICHIGAN

AWOS-3
127.575
CTAF/UNICOM
123.0



EC-1, 17 DEC 2009 to 14 JAN 2010

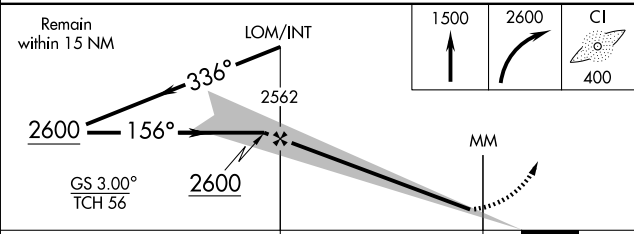
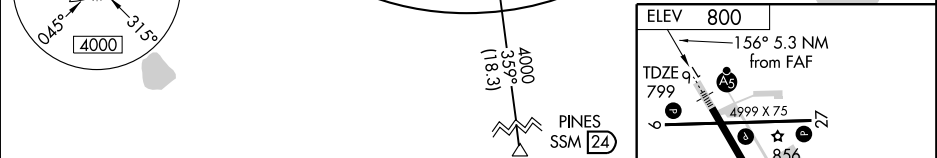
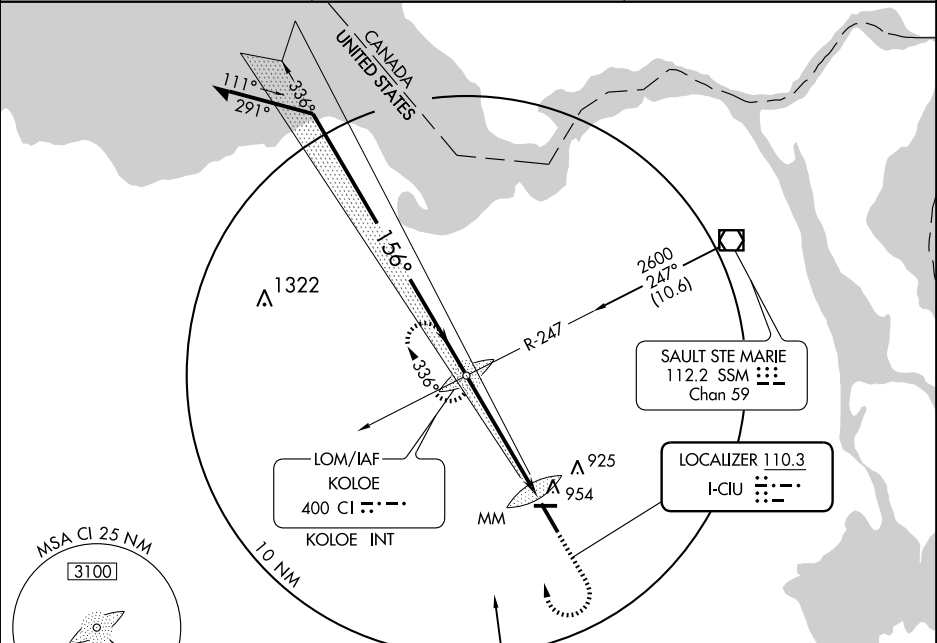
ILS RWY 16

SAULT STE MARIE/ CHIPPEWA COUNTY INTL (CIU)

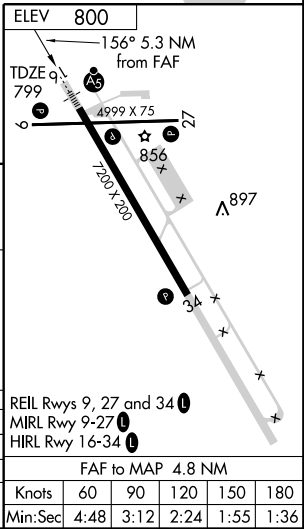
LOC I-CIU	APP CRS	Rwy Idg	7200
110.3	156°	TDZE	799
		Apt Elev	800

NA	ILS unusable from MM inbound.	MALSR	MISSED APPROACH: Climb to 1500 then climbing right turn to 2600 direct CI LOM/Int and hold. (TACAN aircraft climb to 5000 via 160° heading and SSM R-201 to PINES Int/24 DME and hold South, right turns, 021° inbound).
----	-------------------------------	-------	--

AWOS-3	TORONTO CENTER	UNICOM
127.575	132.65 344.5	123.0 (CTAF) 0



CATEGORY	A	B	C	D	E
S-ILS 16	1049-1/2	250 (300-1/2)		1049-3/4	250 (300-3/4)
S-LOC 16	1160-1/2	361 (400-1/2)		1160-3/4	361 (400-3/4)
CIRCLING	1260-1	460 (500-1)	1260-1 1/2 460 (500-1 1/2)	1360-2 560 (600-2)	1380-2 580 (600-2)



AL-810 (FAA)

LOM CI 400	APP CRS 336°	Rwy Idg 7200 TDZE 796 Apt Elev 800
----------------------	------------------------	---

NDB RWY 34

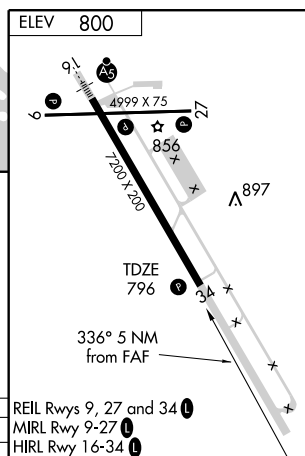
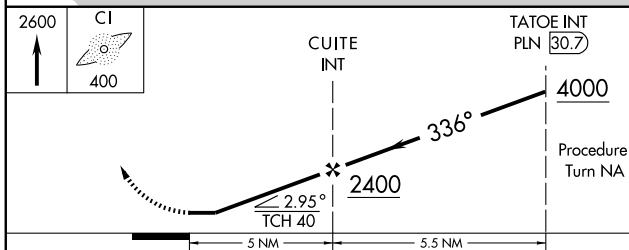
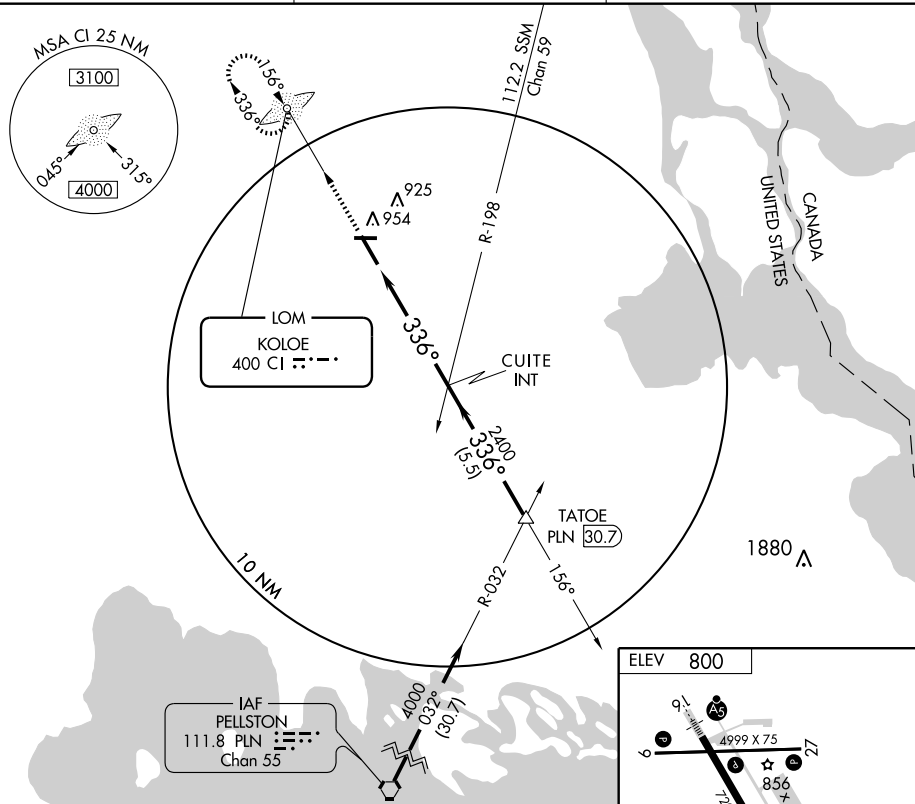
SAULT STE MARIE/CHIPPEWA COUNTY INTL (CIU)

ANA

MISSED APPROACH: Climb to 2600 direct CI LOM and hold.

AWOS-3
127,575

TORONTO CENTER
132.65 344.5

UNICOM
123.0 (CTAF) **L**

CATEGORY	A	B	C	D
S-34	1220-1	424 (500-1)	1220-1¼	424 (500-1¼)
CIRCLING	1260-1	460 (500-1)	1260-1½ 460 (500-1½)	1360-2 560 (600-2)

FAF to MAP 5 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

EC-1. 17 DEC 2009 to 14 JAN 2010

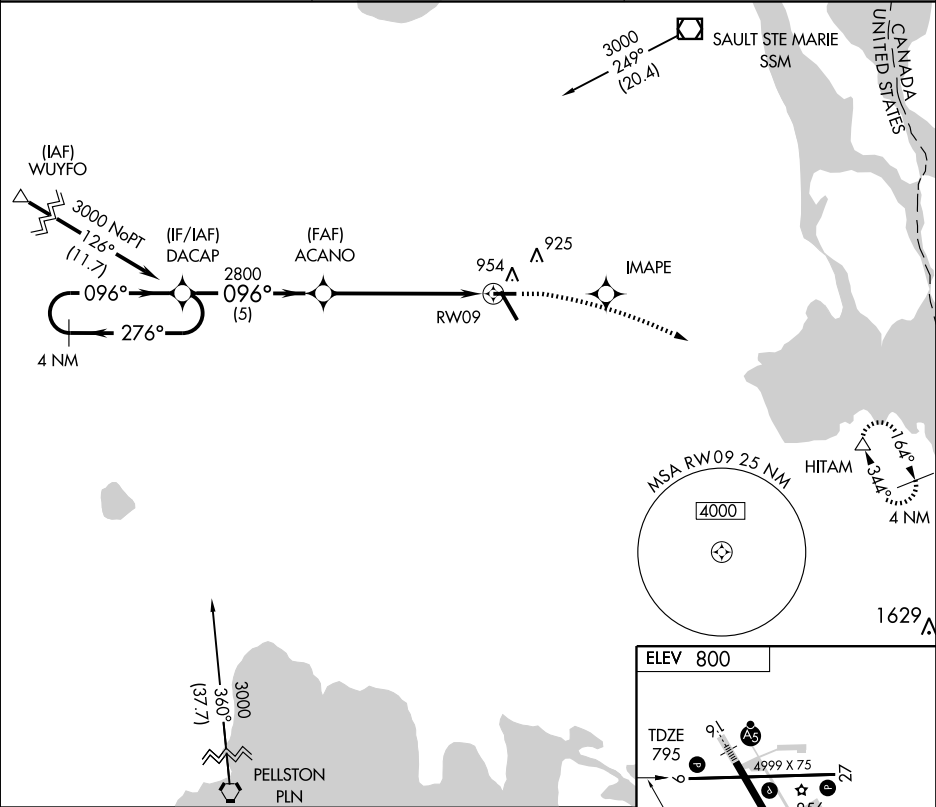
APP CRS	Rwy Idg	4999
096°	TDZE	795
	Apt Elev	800

RNAV (GPS) RWY 9

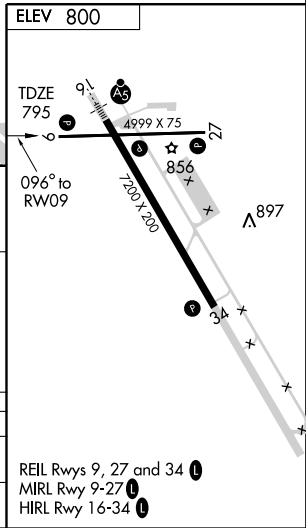
SAULT STE MARIE/ CHIPPEWA COUNTY INTL (CIU)

▲ NA	Straight-in minimums NA at night. GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.	MISSED APPROACH: Climb to 2900 via 096° course to IMAPE WP and via 127° track to HITAM WP and hold.
------	--	--

AWOS-3 127.575	TORONTO CENTER 132.65 344.5	UNICOM 123.0 (CTAF) 0
-------------------	--------------------------------	--------------------------



4 NM Holding Pattern				
DACAP				
ACANO				
2900 IMAPE HITAM				
CRS 096° TRK 127°				
1.5 NM to RW09				
RW09				
3.05° TCH 40				
5 NM 4.6 NM 1.5				
CATEGORY	A	B	C	D
LNAV MDA	1320 - 1	525 (600-1)	1320 - 1½ 525 (600-1½)	1320 - 1¾ 525 (600-1¾)
CIRCLING	1320 - 1	520 (600-1)	1320 - 1½ 520 (600-1½)	1360 - 2 560 (600-2)



REIL Rwy 9, 27 and 34
MIRL Rwy 9-27
HIRL Rwy 16-34

WAAS CH 69215 W16A	APP CRS 156°	Rwy Idg TDZE Apt Elev	7200 799 800
--	------------------------	-----------------------------	---

RNAV (GPS) RWY 16

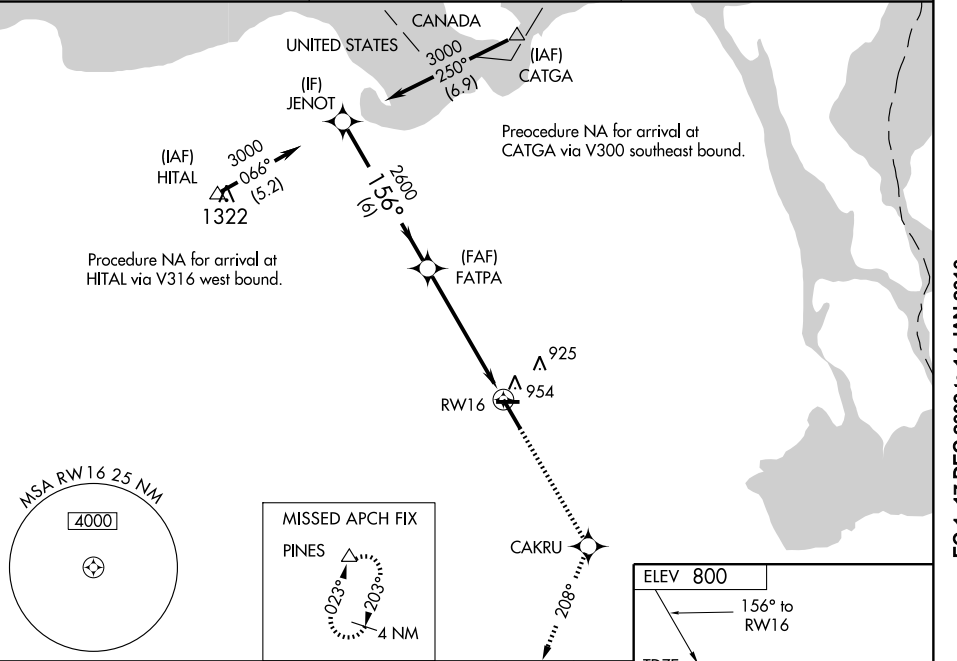
SAULT STE MARIE/CHIPPEWA COUNTY INTL (CIU)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Sault Ste Marie Muni/Sanderson Field altimeter setting and increase all DA 45 feet and all MDA 60 feet. Baro-VNAV and VDP NA when using Sault Ste Marie Muni/Sanderson Field altimeter setting. For inoperative MALSR, increase LPV all Cats, LNAV/VNAV all Cats and LNAV Cats A/B/C ½ mile, increase LNAV Cat D ¼ mile. For inoperative MALSR, when using Sault Ste Marie Muni/Sanderson Field altimeter setting, increase LPV all Cats, LNAV/VNAV all Cats and LNAV all Cats ½ mile.

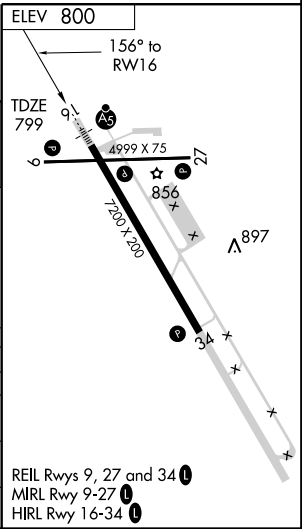
MALSR

MISSED APPROACH: Climb to 3000 direct CAKRU and right turn via track 208° to PINES and hold.

AWOS-3 127.575	TORONTO CENTER 132.65 344.5	UNICOM 123.0 (CTAF)
--------------------------	---------------------------------------	-------------------------------



<div>JENOT</div> <div>3000</div> <div>Procedure Turn NA</div> <div>GS 3.00° TCH 58</div> <div>FATPA</div> <div>2600</div> <div>6 NM</div> <div>4.3 NM</div> <div>1.1 NM</div> <div>3000</div> <div>CAKRU</div> <div>TRK 208°</div> <div>PINES</div> <div>* 1.1 NM to RW16</div> <div>RW16</div> <div>* LNAV only</div>				
CATEGORY	A	B	C	D
LPV DA	1068-½ 269 (300-½)			
LNAV/DA VNAV	1204-1 405 (500-1)			
LNAV MDA	1220-½ 421 (500-½)		1220-¾ 421 (500-¾)	1220-1 421 (500-1)
CIRCLING	1260-1 460 (500-1)		1260-1½ 460 (500-1½)	1360-2 560 (600-2)



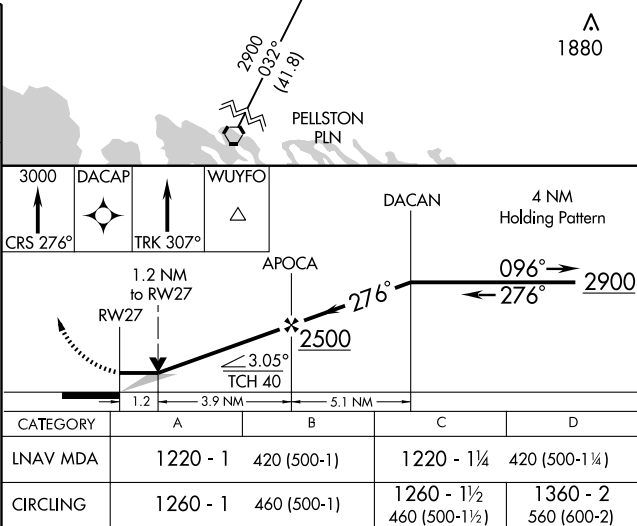
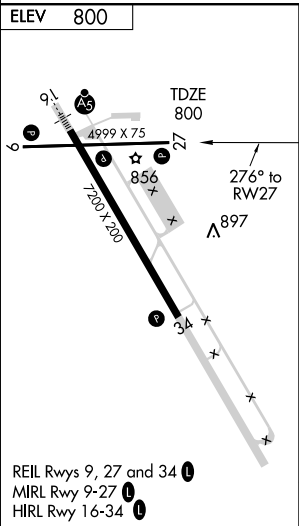
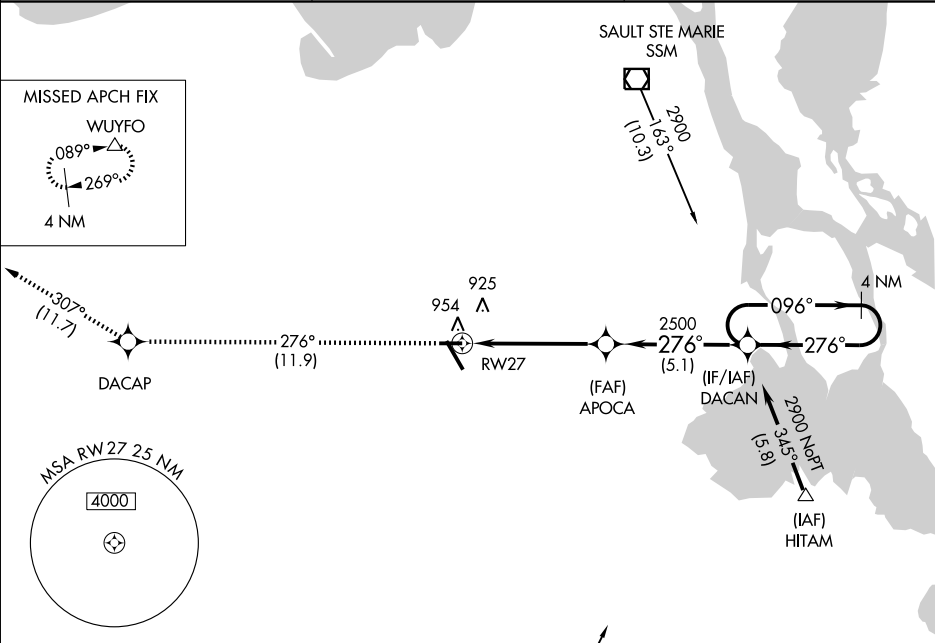
APP CRS	Rwy Idg	4999
276°	TDZE	800
	Apt Elev	800

RNAV (GPS) RWY 27

SAULT STE MARIE/ CHIPPEWA COUNTY INTL (CIU)

▲ NA	Straight-in minimums NA at night. GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.	MISSED APPROACH: Climb to 3000 via 276° course to DACAP WP and via 307° track to WUYFO WP and hold.
------	--	--

AWOS-3 127.575	TORONTO CENTER 132.65 344.5	UNICOM 123.0 (CTAF) 0
-------------------	--------------------------------	--------------------------



WAAS CH 56315 W34A	APP CRS 336°	Rwy Idg TDZE Apt Elev	7200 796 800
--	------------------------	-----------------------------	---

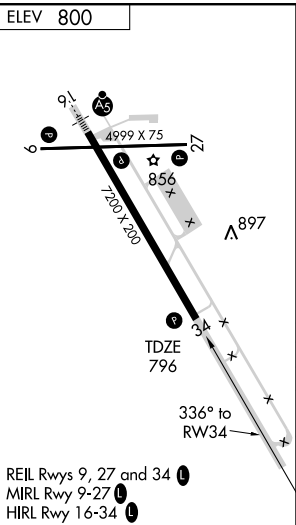
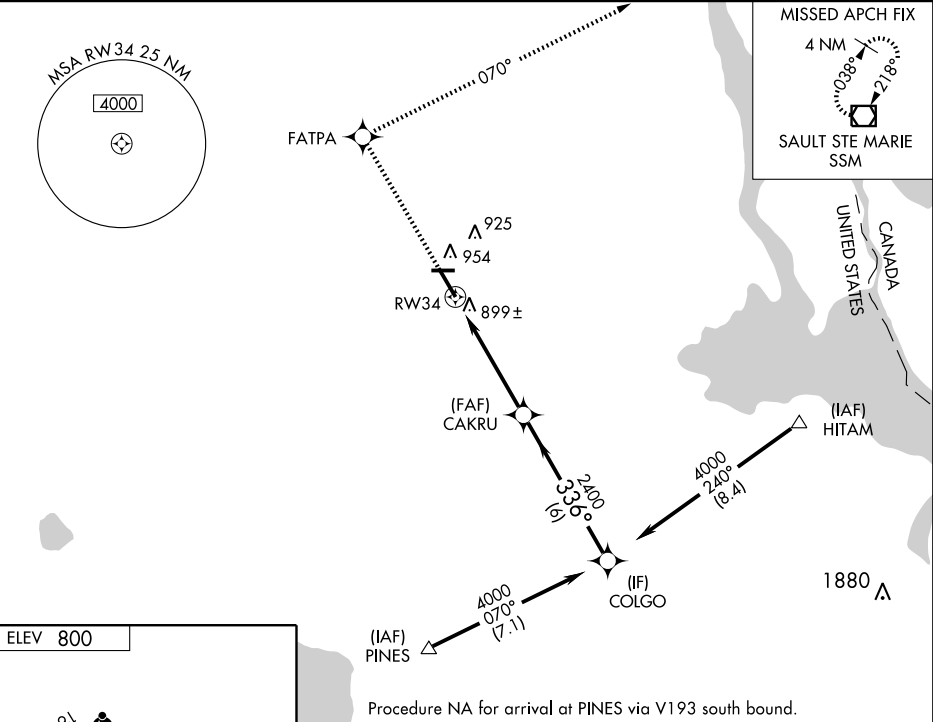
RNAV (GPS) RWY 34

SAULT STE MARIE/ CHIPPEWA COUNTY INTL (CTU)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Sault Ste Marie Muni/Sanderson Field altimeter setting and increase all DA 45 feet and all MDA 60 feet; increase LNAV Cat D visibility ¼ mile. Baro-VNAV and VDP NA when using Sault Ste Marie Muni/Sanderson Field altimeter setting.

MISSED APPROACH: Climb to 3000 direct FATPA and right turn via track 070° to SSM VOR/DME and hold.

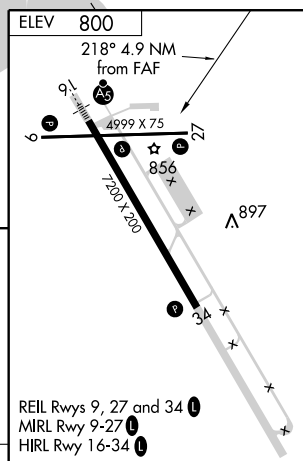
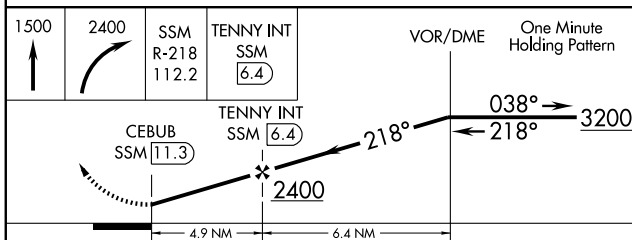
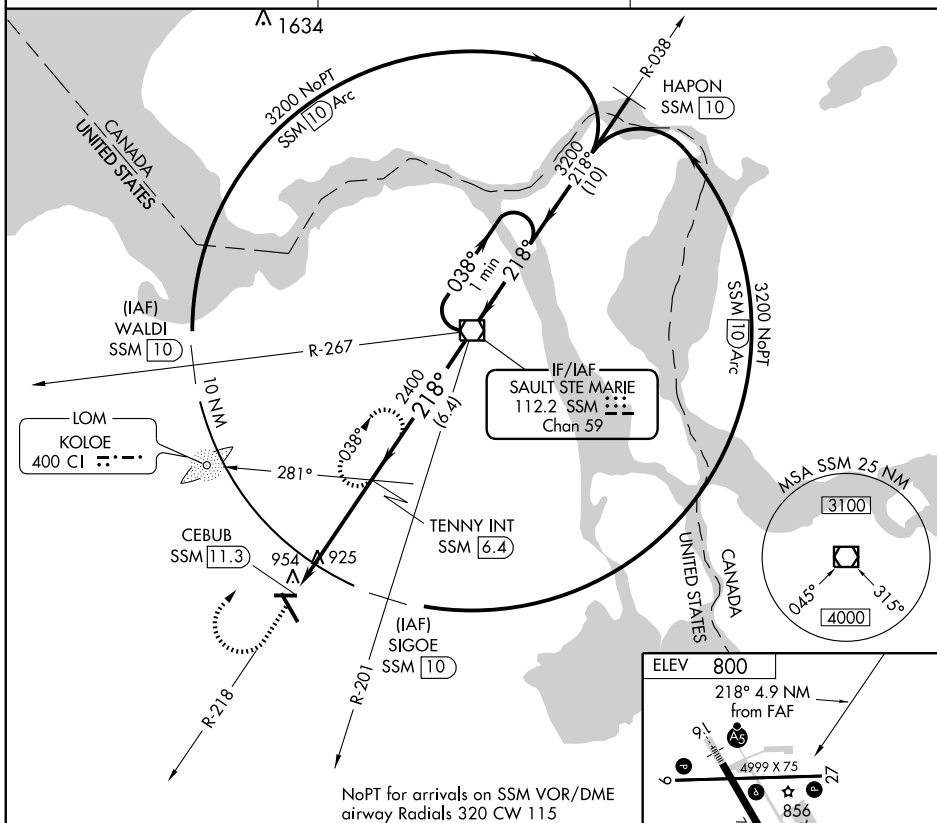
AWOS-3 127.575	TORONTO CENTER 132.65 344.5	UNICOM 123.0 (CTAF) 0
--------------------------	---------------------------------------	---------------------------------



COLGO				3000	FATPA	SSM
4000				↑	✱	☐
Procedure Turn NA				TRK 070°		
GS 3.00° TCH 40				*1.2 NM to RW34		
				*LNAV only		
				6 NM	3.7 NM	1.2 NM
CATEGORY	A	B	C	D		
LPV DA	1046-1		250 (300-1)			
LNAV/VNAV DA	1198-1½		402 (400-1½)			
LNAV MDA	1200-1 404 (400-1)		1200-1¼ 404 (400-1¼)			
CIRCLING	1260-1 460 (500-1)		1260-1½ 1360-2 460 (500-1½) 560 (600-2)			

VOR-A

MISSED APPROACH: Climb to 1500 then climbing right turn to 2400 via SSM R-218 to TENNY Int/6.4 DME and hold.

UNICOM
123.0 (CTAF) **L**

CATEGORY	A	B	C	D	FAF to MAP 4.9 NM					
CIRCLING	1260-1	460 (500-1)	1260-1½ 460 (500-1½)	1360-2 560 (600-2)	Knots	60	90	120	150	180
					Min:Sec	4:54	3:16	2:27	1:58	1:38

APP CRS	Rwy Idg	4801
047°	TDZE	659
	Apt Elev	666

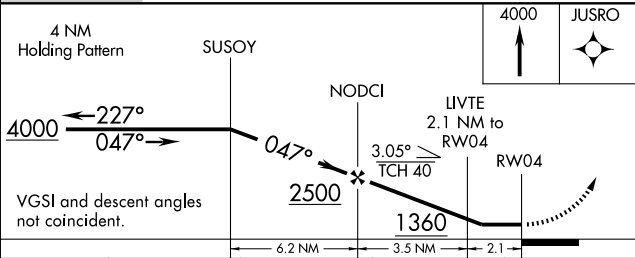
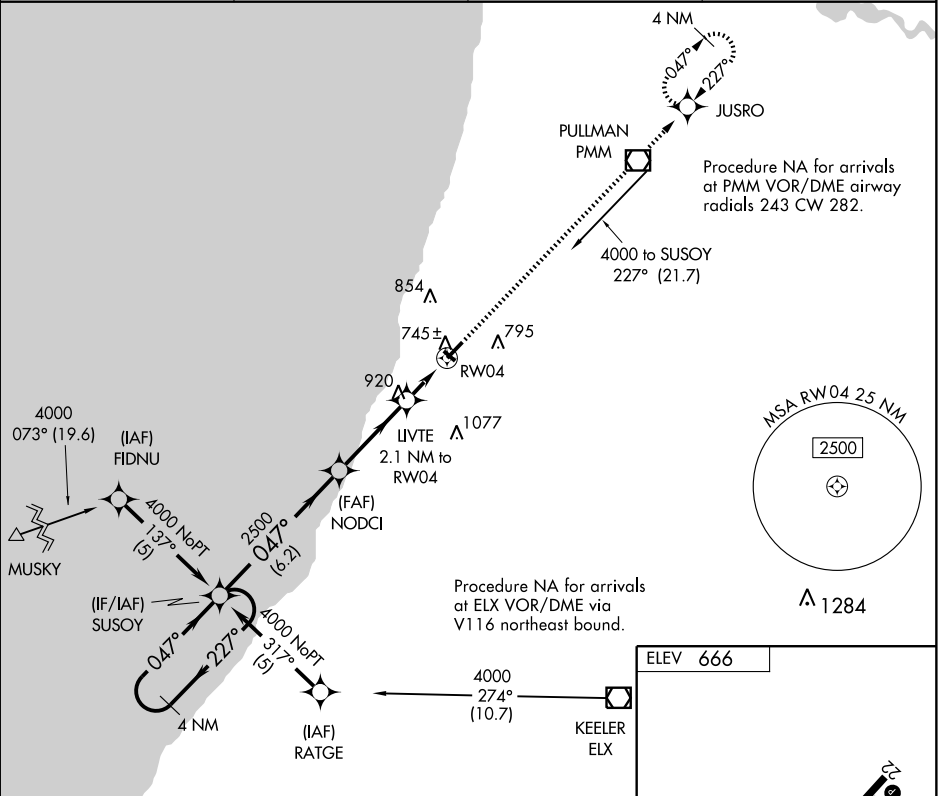
RNAV (GPS) RWY 4

SOUTH HAVEN AREA RGNL (LWA)

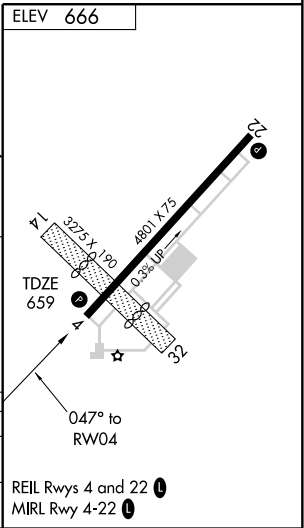
When local altimeter setting not received, use South Bend altimeter setting and increase all MDA 120 feet. Increase LNAV visibility Cat C ¼ mile, Cat D ½ mile and Circling visibility Cat D ¼ mile. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA

MISSED APPROACH: Climb to 4000 direct JUSRO and hold. Continue climb-in-hold to 4000.

AWOS-3 118.025	SOUTH BEND APP CON ★ 118.55 257.8	GCO 121.725	UNICOM 122.8 (CTAF) 0
-------------------	--------------------------------------	----------------	--------------------------



CATEGORY	A	B	C	D
LNAV MDA	1000-1 341 (400-1)			
CIRCLING	1120-1 454 (500-1)	1120-1½ 454 (500-1½)	1280-2 614 (700-2)	



APP CRS	Rwy Idg	4801
227°	TDZE	665
	Apt Elev	666

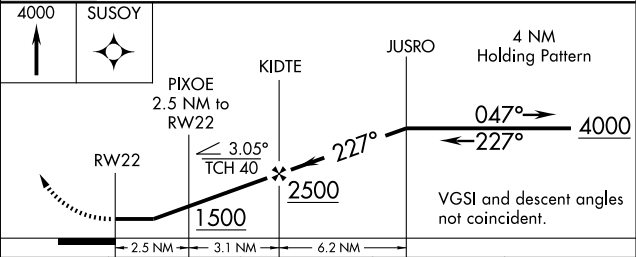
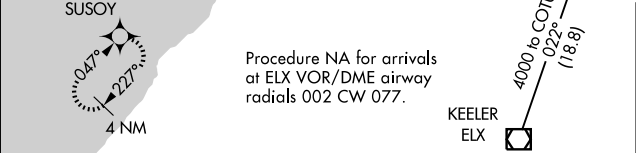
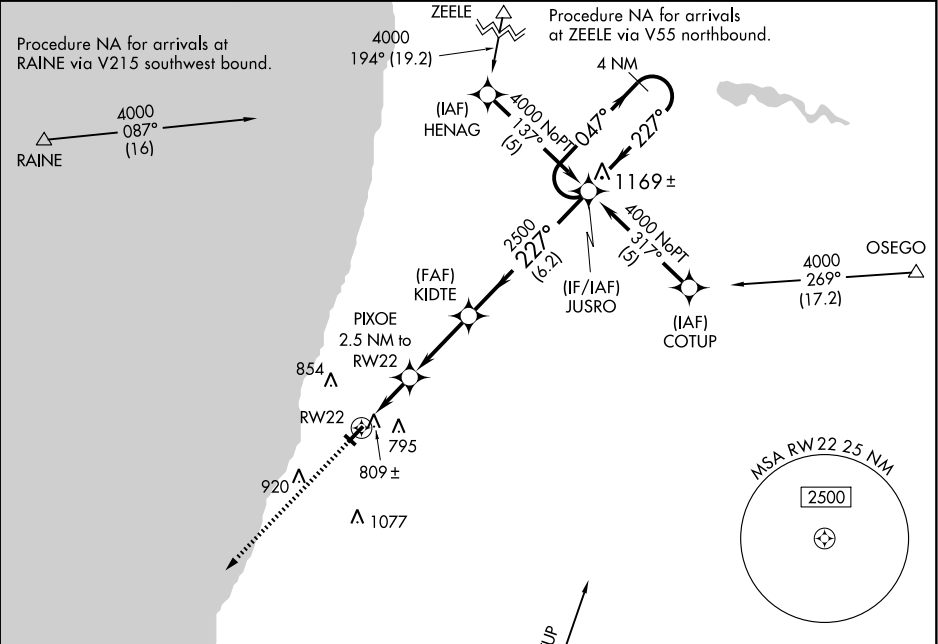
RNAV (GPS) RWY 22

SOUTH HAVEN AREA RGNL (LWA)

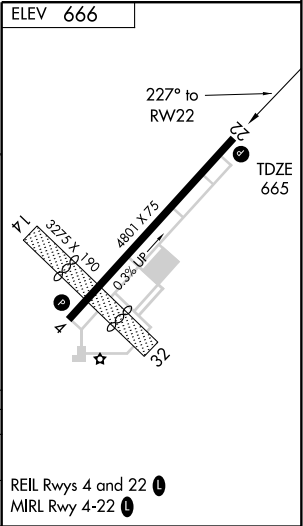
When local altimeter setting not received, use South Bend altimeter setting and increase all MDA 120 feet. Increase LNAV Cat C, D visibility ½ mile, and Circling Cat D visibility ¼ mile. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 4000 direct SUSOY and hold. Continue climb-in-hold to 4000.

AWOS-3 118.025	SOUTH BEND APP CON ★ 118.55 257.8	GCO 121.725	UNICOM 122.8 (CTAF) 1
-------------------	--------------------------------------	----------------	--------------------------



CATEGORY	A	B	C	D
LNAV MDA	1060-1	395 (400-1)		1060-1¼ 395 (400-1¼)
CIRCLING	1120-1	454 (500-1)	1120-1½ 454 (500-1½)	1280-2 614 (700-2)



VOR/DME PMM 112.1 Chan 58	APP CRS 224°	Rwy Idg 4801 TDZE 665 Apt Elev 666
---	------------------------	---

VOR RWY 22
SOUTH HAVEN AREA RGNL (LWA)

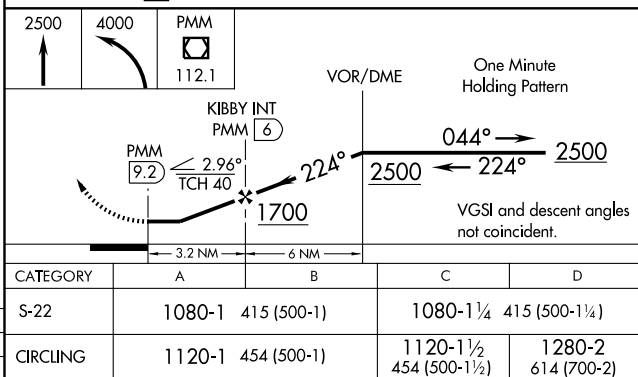
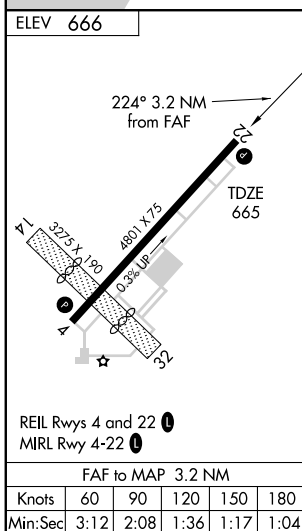
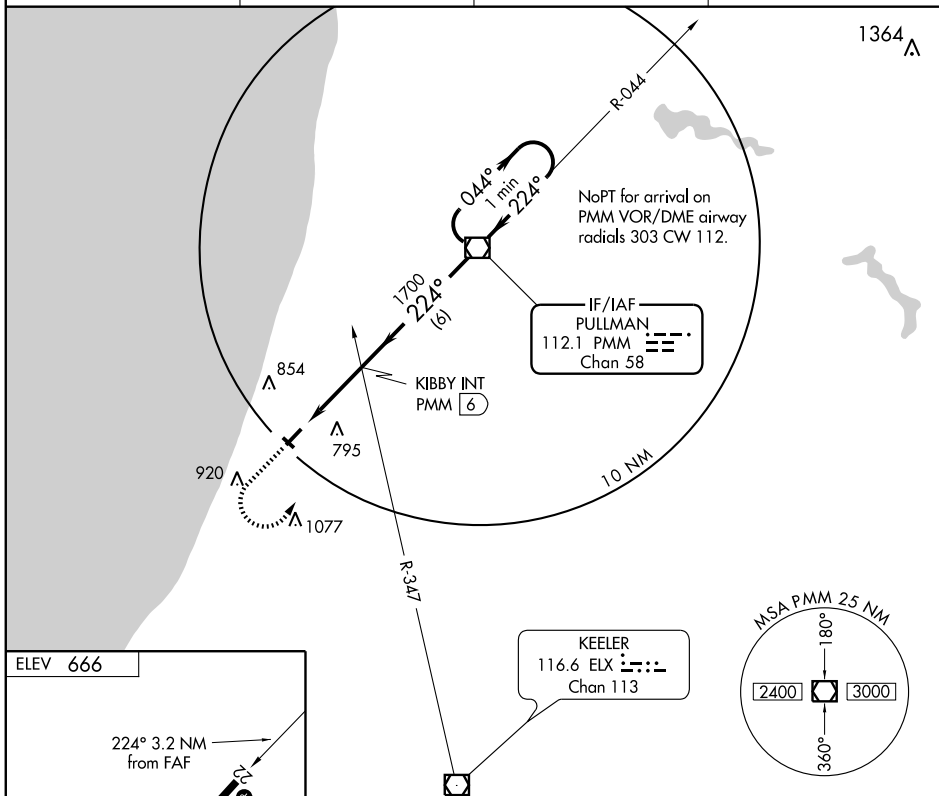
T When local altimeter setting not received, use South Bend altimeter setting and increase all MDA 120 feet. Increase S-22 visibility Cat C $\frac{1}{4}$ mile, Cat D $\frac{1}{2}$ mile and Circling Cat D $\frac{1}{4}$ mile. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 2500 then climbing left turn to 4000 direct PMM VOR/DME and hold.

AWOS-3
118.025

SOUTH BEND APP CON ★
118.55 257.8

GCO
121.725

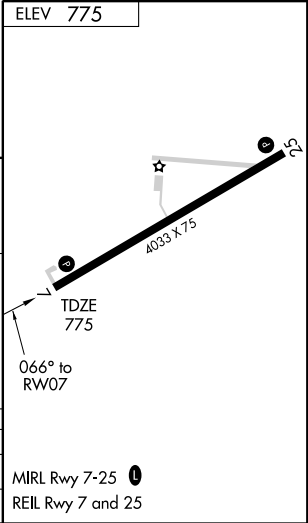
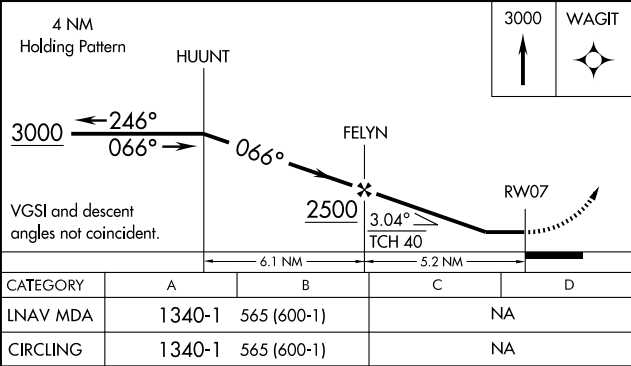
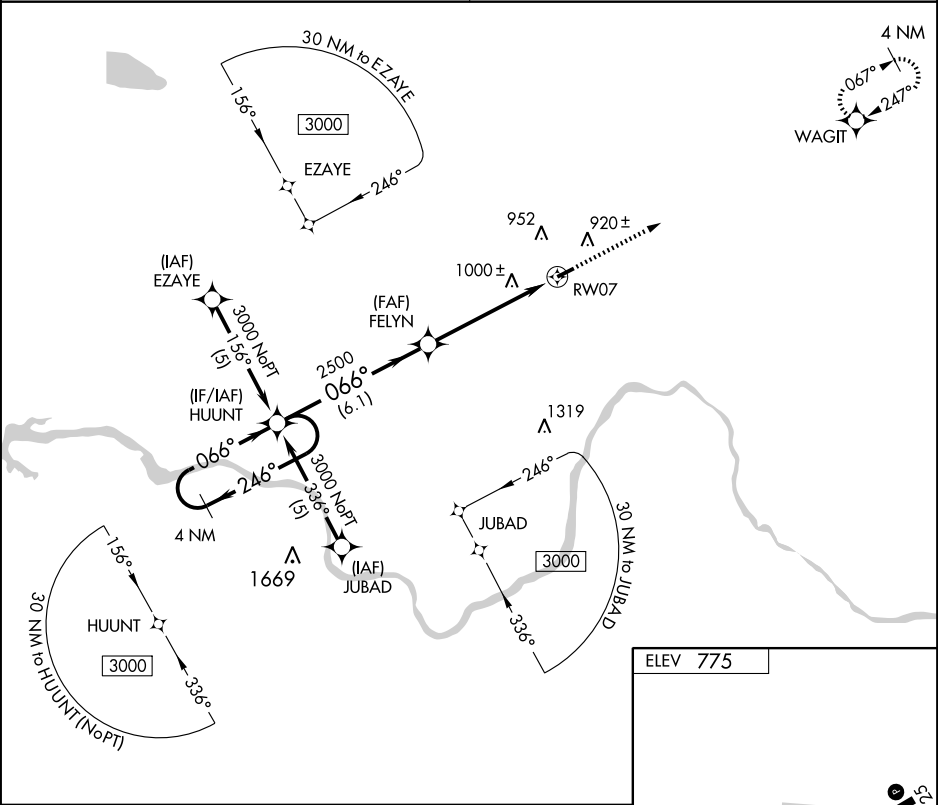
UNICOM
122.8 (CTAF) **L**

APP CRS	Rwy Idg	4033
066°	TDZE	775
	Apt Elev	775

RNAV (GPS) RWY 7
SPARTA / PAUL C. MILLER - SPARTA (8D4)

<p>▼ DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. ▲ When local altimeter setting not received, use Grand Rapids altimeter setting and increase all MDA 60 feet.</p>	<p>MISSED APPROACH: Climb to 3000 direct WAGIT and hold.</p>
--	--

<p>GRAND RAPIDS APP CON ★ 124.6 257.6</p>	<p>UNICOM 122.8 (CTAF) 0</p>
---	----------------------------------



APP CRS	Rwy Idg	4033
247°	TDZE	775
	Apt Elev	775

RNAV (GPS) RWY 25

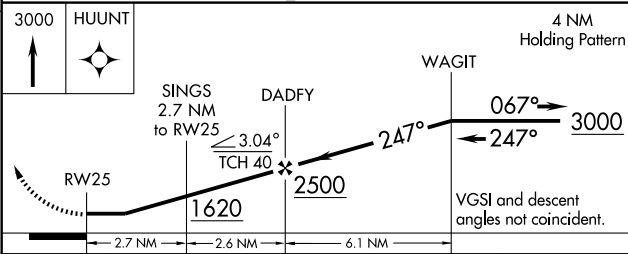
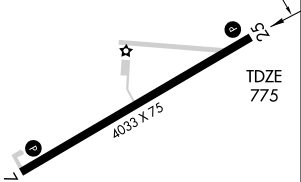
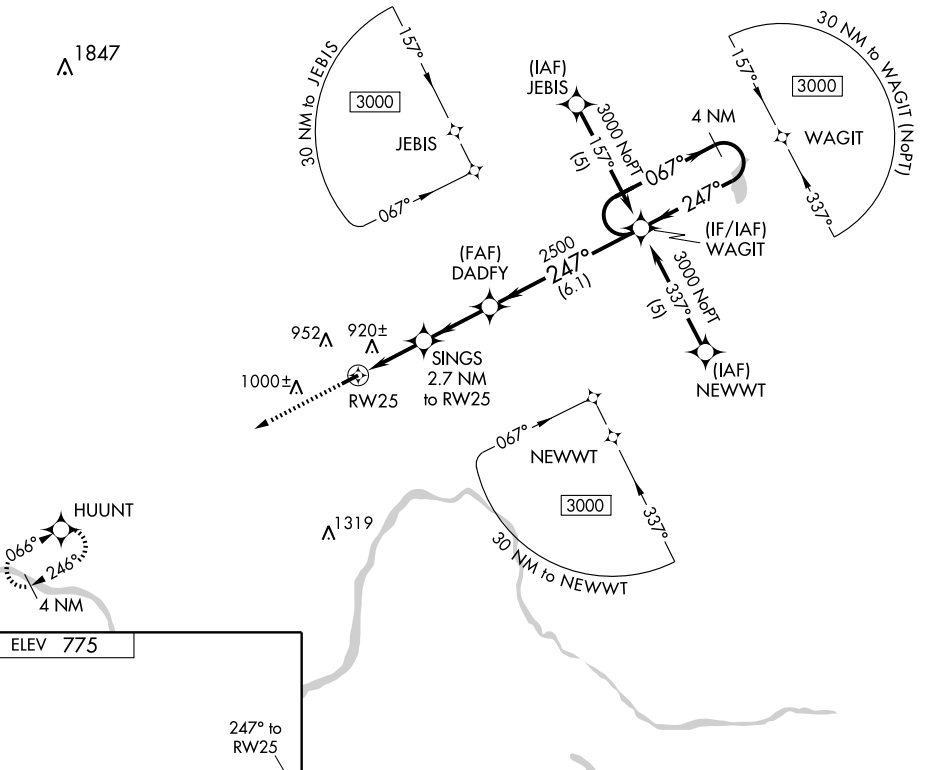
SPARTA / PAUL C. MILLER - SPARTA (8D4)

⚠ DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.
⚠ When local altimeter setting not received, use Grand Rapids altimeter setting and increase all MDA 60 feet.

MISSED APPROACH: Climb to 3000 direct HUUNT and hold.

GRAND RAPIDS APP CON ★
124.6 257.6

UNICOM
122.8 (CTAF) **0**



CATEGORY	A	B	C	D
LNAV MDA	1220-1	445 (500-1)	NA	
CIRCLING	1280-1 505 (600-1)	1320-1 545 (600-1)	NA	

MIRL Rwy 7-25 **0**
REIL Rwy 7 and 25

APP CRS	Rwy Idg	3800
074°	TDZE	623
	Apt Elev	623

RNAV (GPS) RWY 7

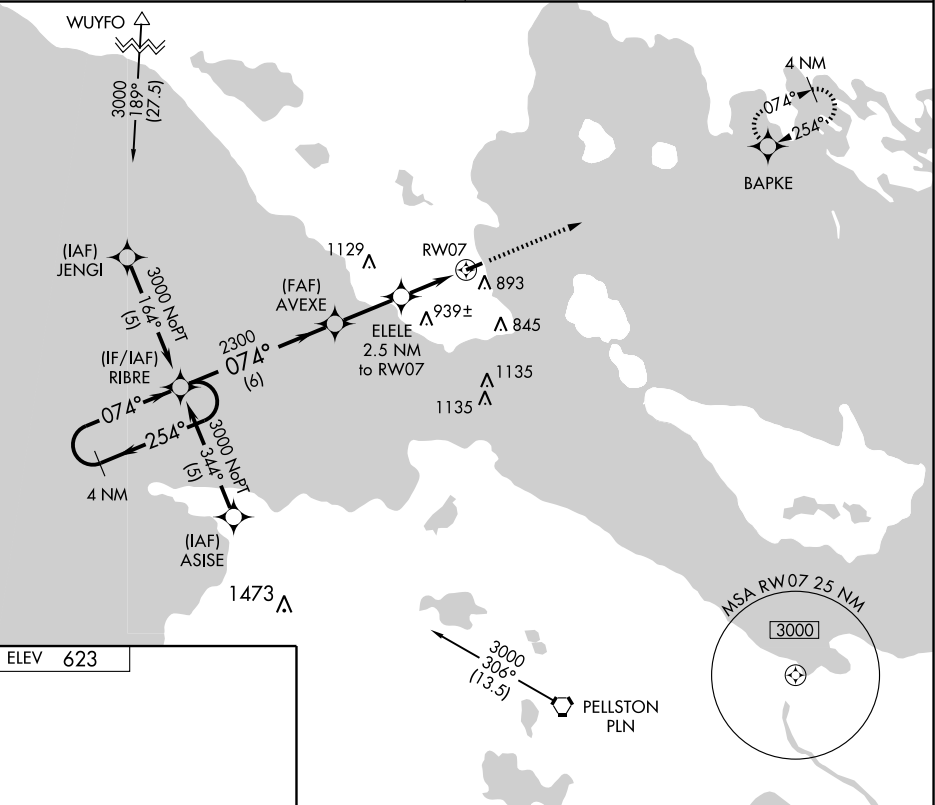
ST IGNACE / MACKINAC COUNTY (83D)

▲ NA

Use Mackinac Island altimeter setting.
GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.
Circling NA at night south of Rwy 7-25.

MISSED APPROACH: Climb to 3000
direct BAPKE WP and hold.

MINNEAPOLIS CENTER 134.6 354.05	UNICOM 122.7 (CTAF) 0
------------------------------------	--------------------------



ELEV 623

TDZE 623

074° to RW07

3800 X 75

0.4% UP

75

MIRL Rwy 7-25 0

REIL Rws 7 and 25 0

4 NM Holding Pattern RIBRE				
3000 ← 254° 074° →				
VGSI and descent angles not coincident. 3.04° TCH 45				
AVEXE 2300				
ELELE 2.5 NM to RW07 1460				
1.3 NM to RW07 RW07				
CATEGORY	A	B	C	D
LNAV MDA	1200-1	577 (600-1)	1200-1½ 577 (600-1½)	NA
CIRCLING	1260-1	637 (700-1)	1260-1¾ 637 (700-1¾)	NA

APP CRS 254°	Rwy Idg TDZE Apt Elev	3800 623 623
------------------------	-----------------------------	---

RNAV (GPS) RWY 25

ST IGNACE / MACKINAC COUNTY (83D)

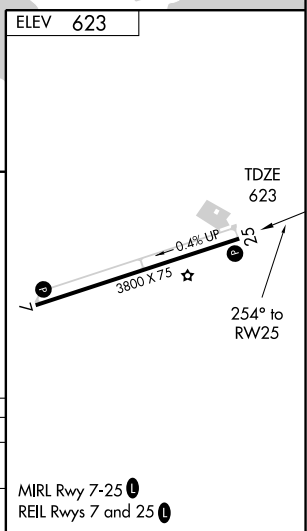
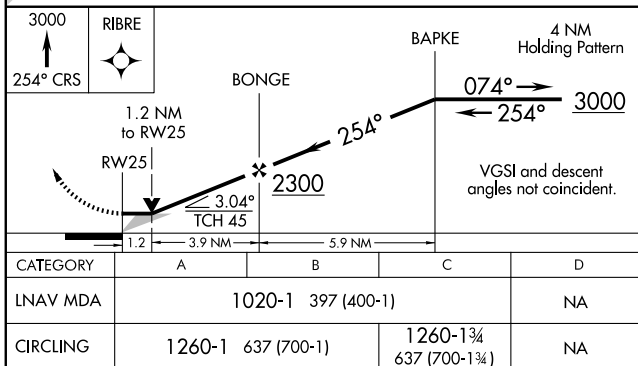
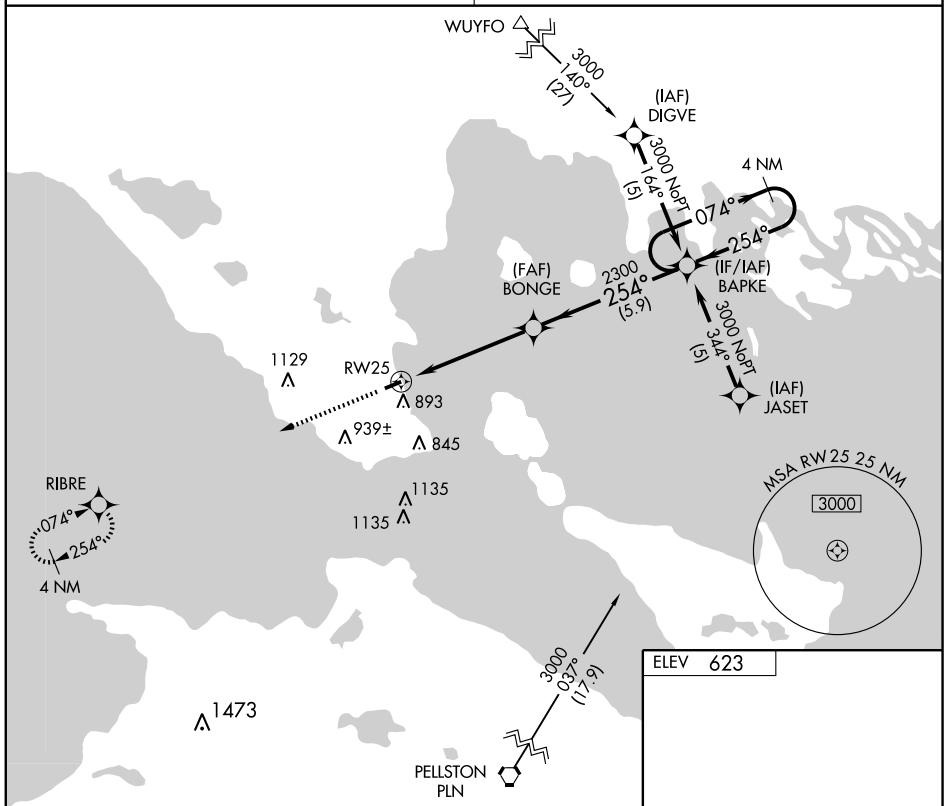
ANA

Use Mackinac Island altimeter setting.
GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.
Circling NA at night south of RWY 7-25.

MISSED APPROACH: Climb to 3000 via 254° course to RIBRE WP and hold.

MINNEAPOLIS CENTER
134.6 354.05

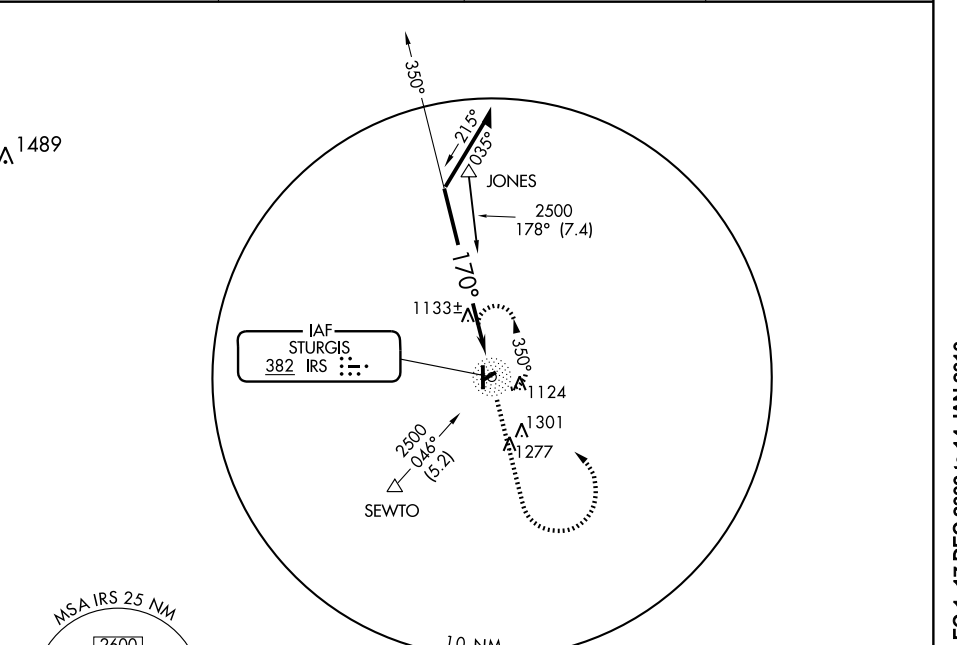
UNICOM
122.7 (CTAF) **L**



NA

MISSED APPROACH: Climb to 2500 then
left turn direct IRS NDB and hold.

AWOS-3 121.325	KALAMAZOO APP CON ★ 121.2 340.9	CLNC DEL 133.55	UNICOM 123.05 (CTAF)
--------------------------	---	---------------------------	--------------------------------



Remain within 10 NM

2500

350°

170°

2500

IRS
382

ELEV 925

TDZE 81
915

001 X 005

3451 X 75

0.3% UP

1117

CATEGORY	A	B	C	D
S-18	1500-1	585 (600-1)	1500-1½ 585 (600-1½)	1500-1¾ 585 (600-1¾)
CIRCLING	1500-1	575 (600-1)	1500-1½ 575 (600-1½)	1620-2¼ 695 (700-2¼)

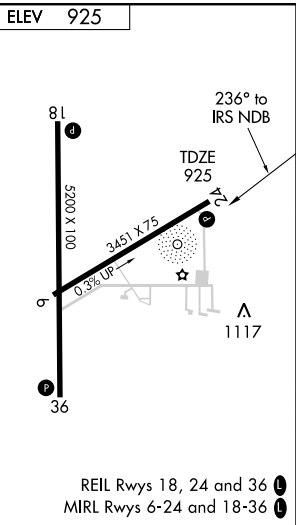
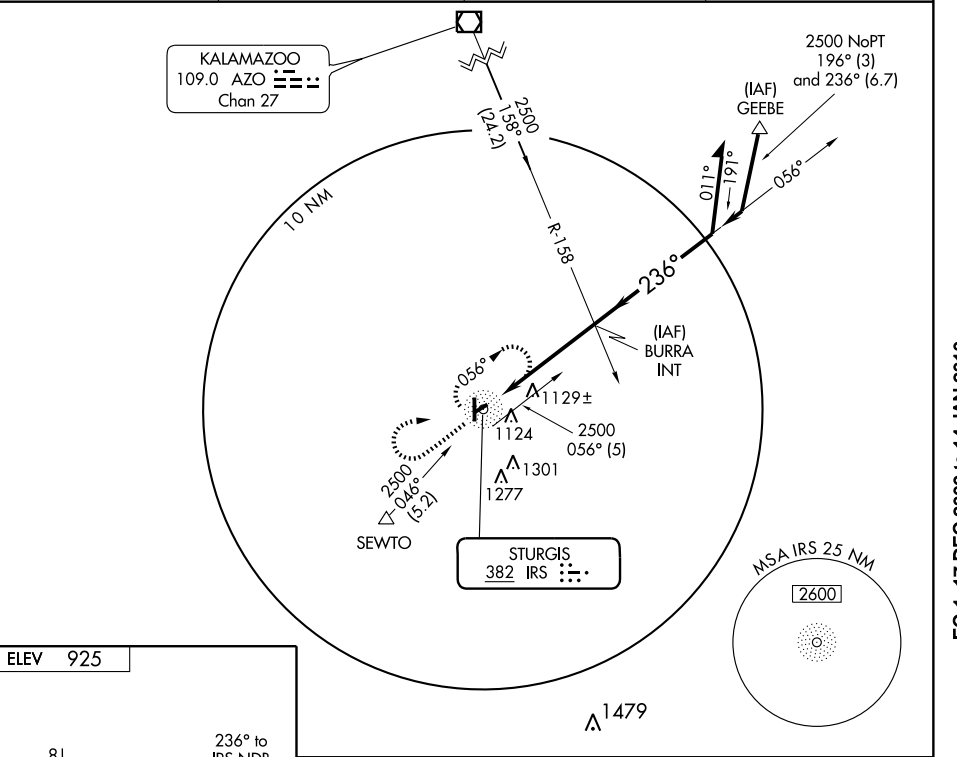
REIL Rwy 18, 24 and 36
MIRL Rwy 6-24 and 18-36

EC-1.17 DEC 2009 to 14 JAN 2010

NA

MISSED APPROACH: Climb to 2500 then right turn direct IRS NDB and hold.

AWOS-3 121.325	KALAMAZOO APP CON ★ 121.2 340.9	CLNC DEL 133.55	UNICOM 123.05 (CTAF)
--------------------------	---	---------------------------	--------------------------------



2500

IRS

382

NDB

2500

BURRA INT

2500

Remain within 10 NM

056°

236°

2500

CATEGORY	A	B	C	D
S-24	1460-1	535 (600-1)	1460-1½ 535 (600-1½)	1460-1¾ 535 (600-1¾)
CIRCLING	1460-1	535 (600-1)	1460-1½ 535 (600-1½)	1620-2¼ 695 (700-2¼)

EC-1.17 DEC 2009 to 14 JAN 2010

APP CRS	Rwy Idg	5200
184°	TDZE	914
	Apt Elev	925

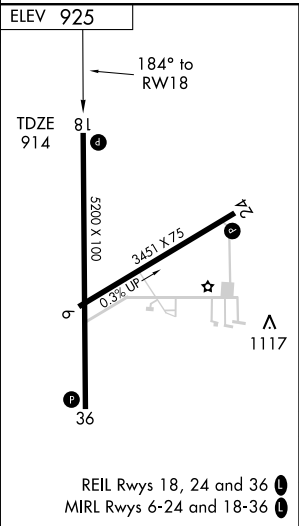
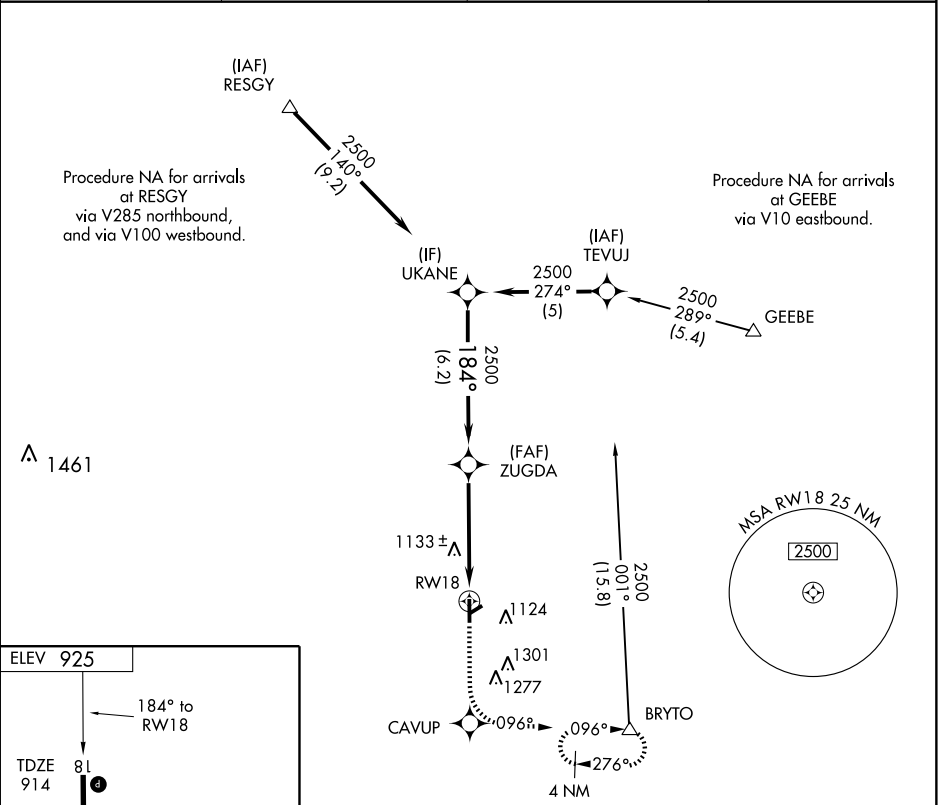
RNAV (GPS) RWY 18

STURGIS/KIRSCH MUNI (IRS)

▼ DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.
▲ When local altimeter setting not received, use Three Rivers altimeter setting and increase all MDAs 40 feet and LNAV Cat C and D visibility ¼ mile.

MISSED APPROACH: Climb to 3000 direct CAVUP and via 096° track to BRYTO and hold.

AWOS-3 121.325	KALAMAZOO APP CON ★ 121.2 340.9	CLNC DEL 133.55	UNICOM 123.05 (CTAF) 0
--------------------------	---	---------------------------	----------------------------------



	UKANE	ZUGDA	3000	CAVUP	096° track	BRYTO
			↑	✦		△
	2500	2500	184°	184°		
Procedure Turn NA	VGSI and descent angles not coincident.		3.05° TCH 40			
	6.2 NM		4.8 NM			
CATEGORY	A	B	C	D		
LNAV MDA	1400-1	486 (500-1)	1400-1 ¼ 486 (500-1 ¼)	1400-1 ½ 486 (500-1 ½)		
CIRCLING	1420-1	495 (500-1)	1440-1 ½ 515 (600-1 ½)	1620-2 ¼ 695 (700-2 ¼)		

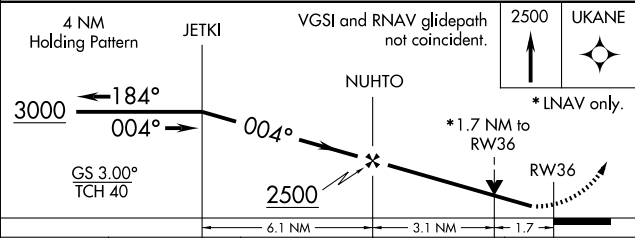
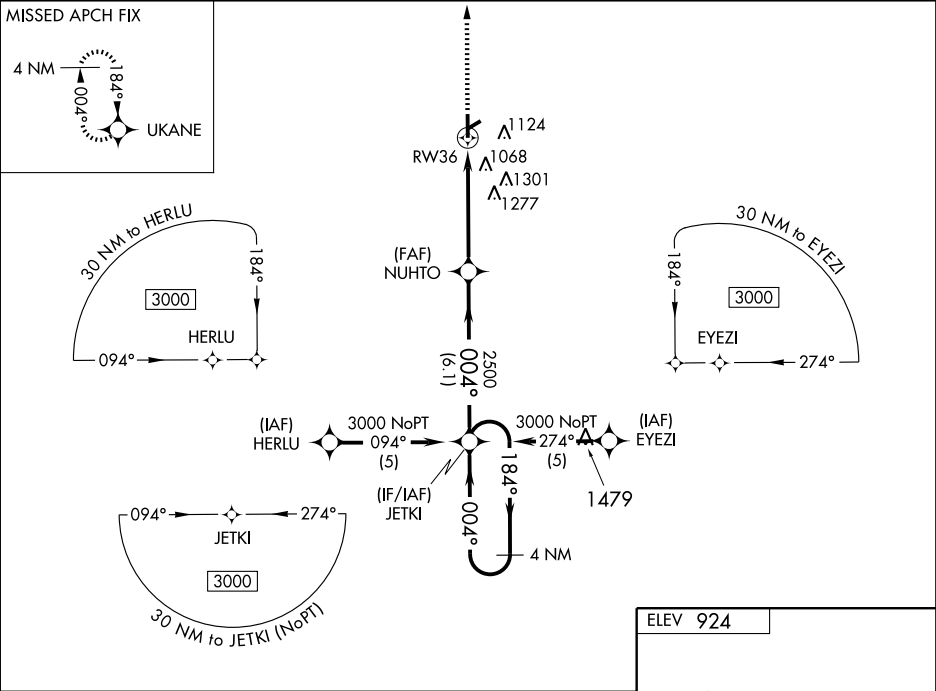
WAAS CH 42915 W36A	APP CRS 004°	Rwy Idg TDZE Apt Elev	5200 915 924
--	------------------------	-----------------------------	---

RNAV (GPS) RWY 36
STURGIS/KIRSCH MUNI (IRS)

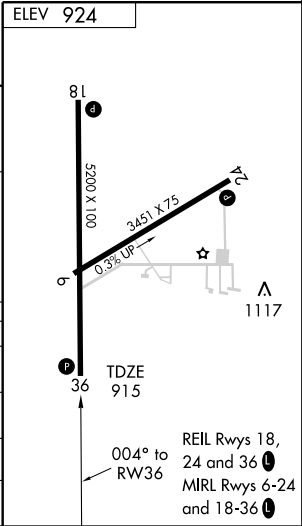
⚠ For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Three Rivers altimeter setting and increase all DA/MDA 40 feet, increase LNAV/VNAV all Cats and LNAV Cat C/D visibility ¼ mile. VDP NA when using Three Rivers altimeter setting. Baro-VNAV NA when using Three Rivers altimeter setting.

MISSED APPROACH:
Climb to 2500 direct UKANE and hold.

AWOS-3 121.325	KALAMAZOO APP CON ★ 121.2 340.9	CLNC DEL 133.55	UNICOM 123.05 (CTAF) ①
--------------------------	---	---------------------------	----------------------------------



CATEGORY	A	B	C	D
LPV DA	1178-1 263 (300-1)			
LNAV/ VNAV DA	1354-1½ 439 (500-1½)			
LNAV MDA	1480-1 565 (600-1)	1480-1½ 565 (600-1½)	1480-1¾ 565 (600-1¾)	1480-2 565 (600-2)
CIRCLING	1480-1 556 (600-1)	1480-1½ 556 (600-1½)	1620-2¼ 696 (700-1¼)	1620-2 696 (700-2)



DETROIT, MICHIGAN



ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUXX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUXX INT. Thence

FORT WAYNE TRANSITION (FWA.CRUXX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUXX INT. Thence

LITCHFIELD TRANSITION (LFD.CRUXX4): From over LFD VORTAC via LFD R-106 to CRUXX INT. Thence

. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUXX INT via 025° heading.

. . . . Aircraft landing YIP or ARB: From over CRUXX INT via 050° heading.
Expect radar vector to final approach course.

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON

127.5 239.275

WILLOW RUN ATIS 127.425

PONTIAC ATIS 125.025

COLEMAN A. YOUNG ATIS 124.875

WINDSOR ATIS 134.5

SELFREDGE ATIS 125.325 270.1

SPRTN

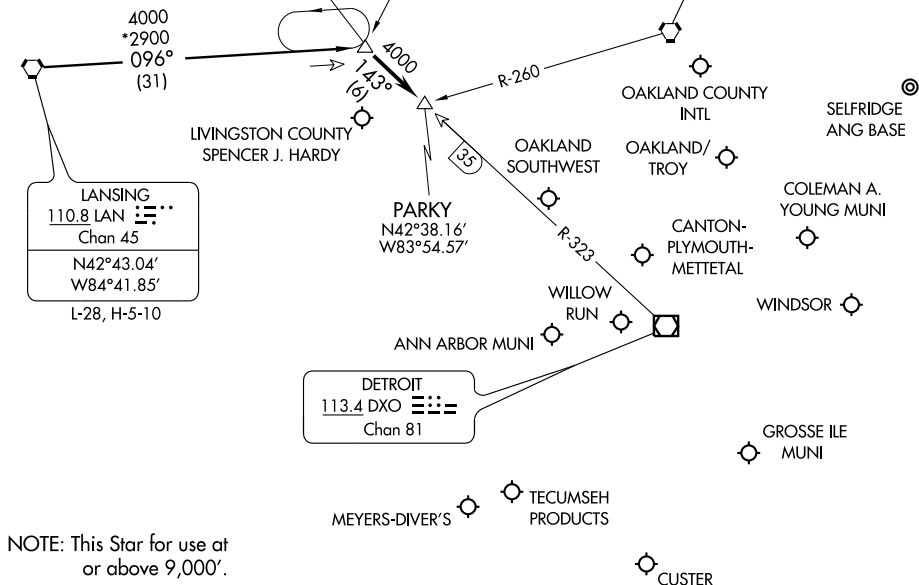
N42°42.52'-W84°00.23'

VERTICAL NAVIGATION

PLANNING INFORMATION

TURBOJETS/TURBOPROPS:

Expect clearance to cross at 9000'.



NOTE: This Star for use at or above 9,000'.

NOTE: Chart not to scale.

LANSGING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence

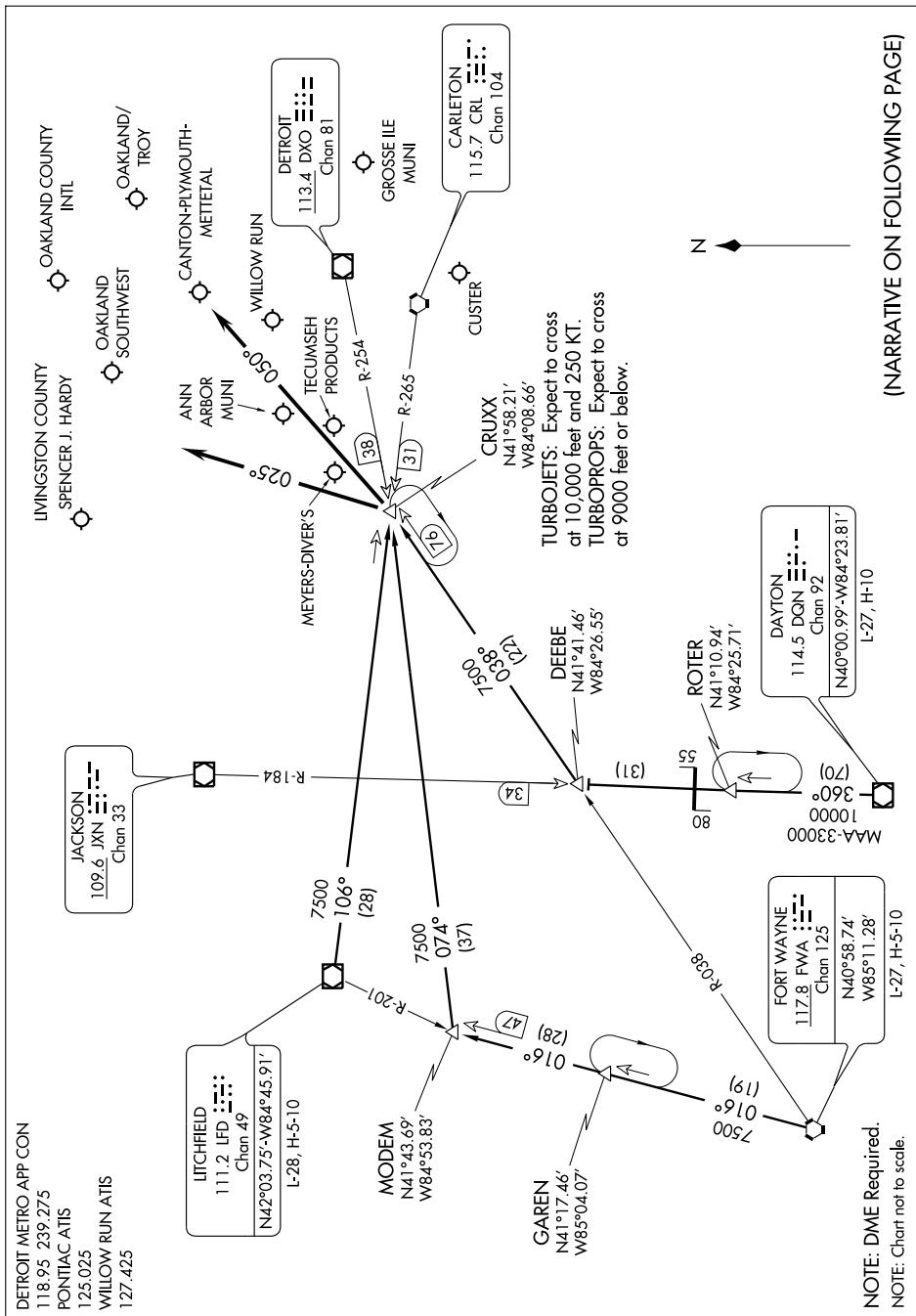
. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ,

1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence

. . . . Expect radar vectors to final approach course.

CRUXX FOUR ARRIVAL

DETROIT, MICHIGAN



ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUXX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUXX INT. Thence

FORT WAYNE TRANSITION (FWA.CRUXX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUXX INT. Thence

LITCHFIELD TRANSITION (LFD.CRUXX4): From over LFD VORTAC via LFD R-106 to CRUXX INT. Thence

. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUXX INT via 025° heading.

. . . . Aircraft landing YIP or ARB: From over CRUXX INT via 050° heading.
Expect radar vector to final approach course.

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON

127.5 239.275

WILLOW RUN ATIS 127.425

PONTIAC ATIS 125.025

COLEMAN A. YOUNG ATIS 124.875

WINDSOR ATIS 134.5

SELFREDGE ATIS 125.325 270.1

SPRTN

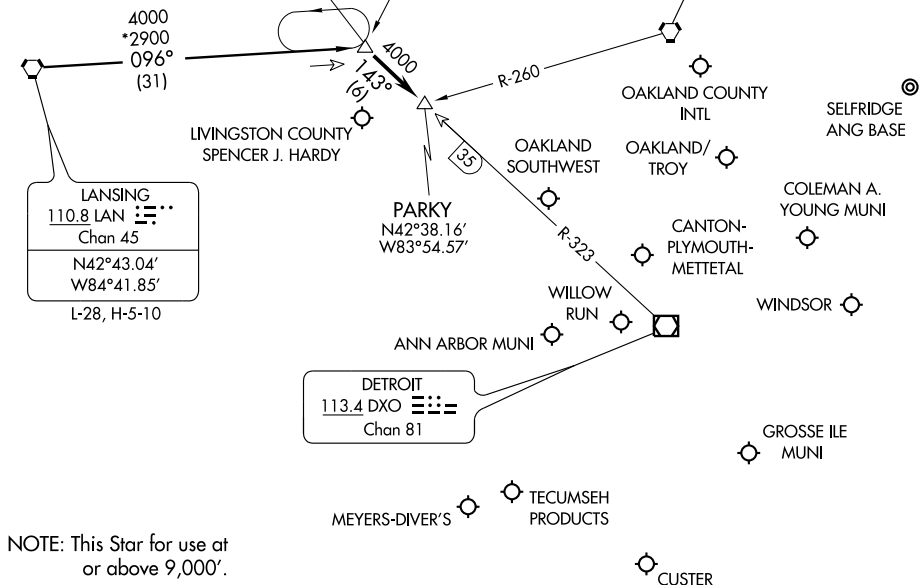
N42°42.52'-W84°00.23'

VERTICAL NAVIGATION

PLANNING INFORMATION

TURBOJETS/TURBOPROPS:

Expect clearance to cross at 9000'.



NOTE: This Star for use at or above 9,000'.

NOTE: Chart not to scale.

LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence

. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ,

1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence

. . . . Expect radar vectors to final approach course.

▼

▲ NA

Use Detroit Willow Run alimeter setting.

MISSED APPROACH: Climbing left turn to 2300 via CRL R-269 to WAYNN 11.5 DME and hold.

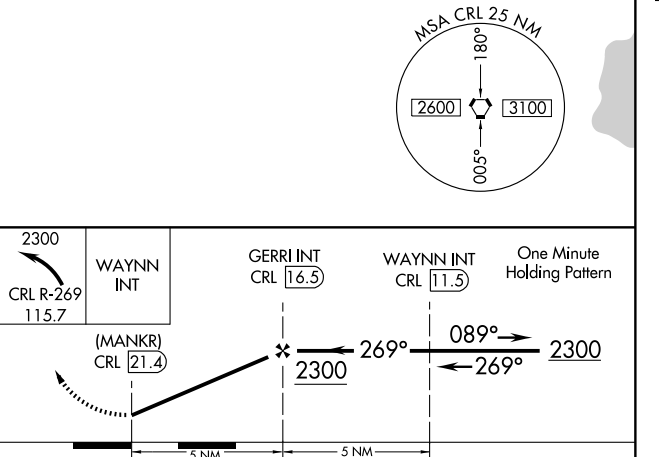
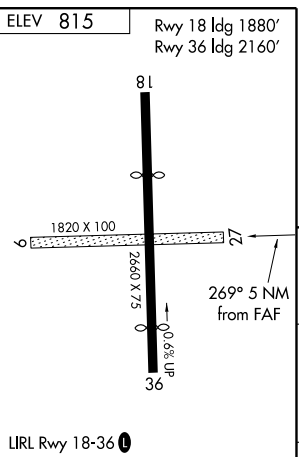
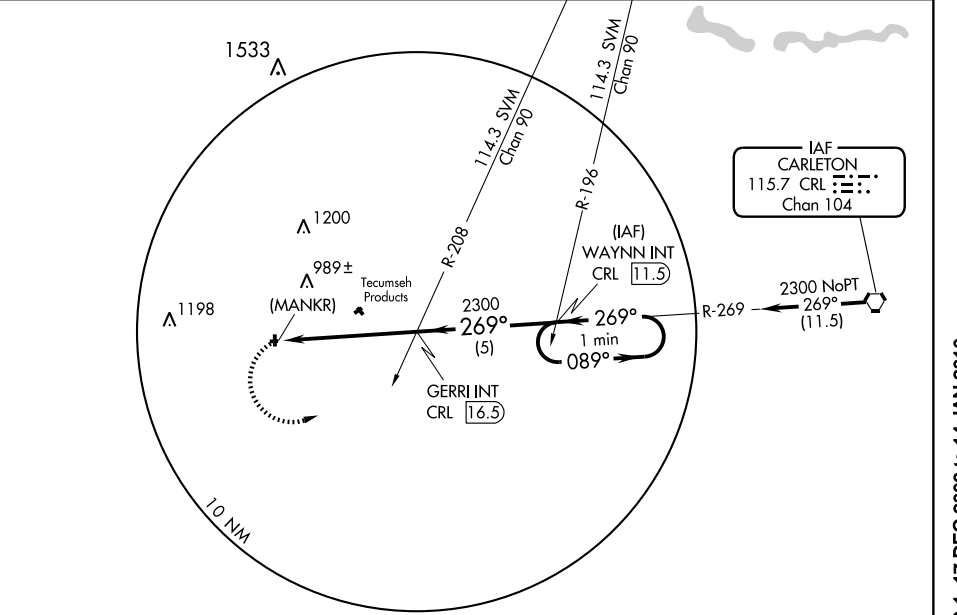
DETROIT METROPOLITAN WAYNE COUNTY

APP CON

118.95 363.2

CTAF 0

122.9



FAF to MAP 5 NM						CATEGORY	A	B	C	D
Knots	60	90	120	150	180	CIRCLING	1380-1 565 (600-1)	1380-1¼ 565 (600-1¼)	NA	
Min:Sec	5:00	3:20	2:30	2:00	1:40					

NDB HAI
407

APP CRS
252°

Rwy Idg	4000
TDZE	823
Apt Elev	824

NDB RWY 27

THREE RIVERS MUNI DR. HAINES (HAI)

A NA

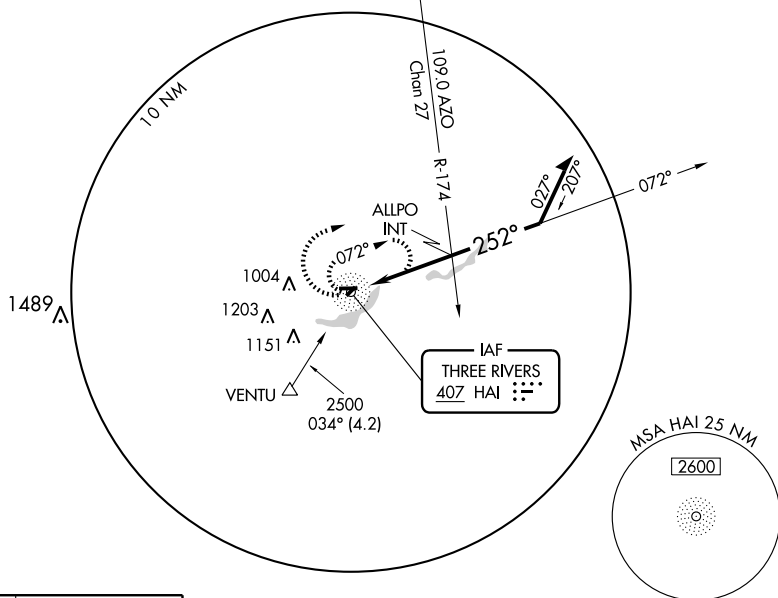
Use Kalamazoo altimeter setting; when not received, use South Bend altimeter setting and increase all MDAs 100 feet and all visibilities ½ mile.

MISSED APPROACH: Climbing right turn to 2500 in HAI NDB holding pattern.

AWOS-3
119.975

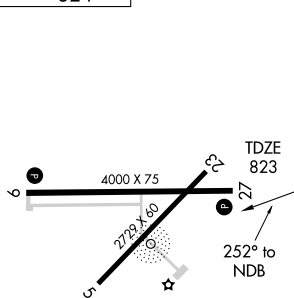
KALAMAZOO APP CON ★
121.2 340.9

GCO
121.725

UNICOM
122.8 (CTAF) **L**

EC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 824



REIL Rwys 9 and 27
MIRL Rwys 5-23 and 9-27 **L**

Diagram illustrating the Allpo Fix Minimums procedure:

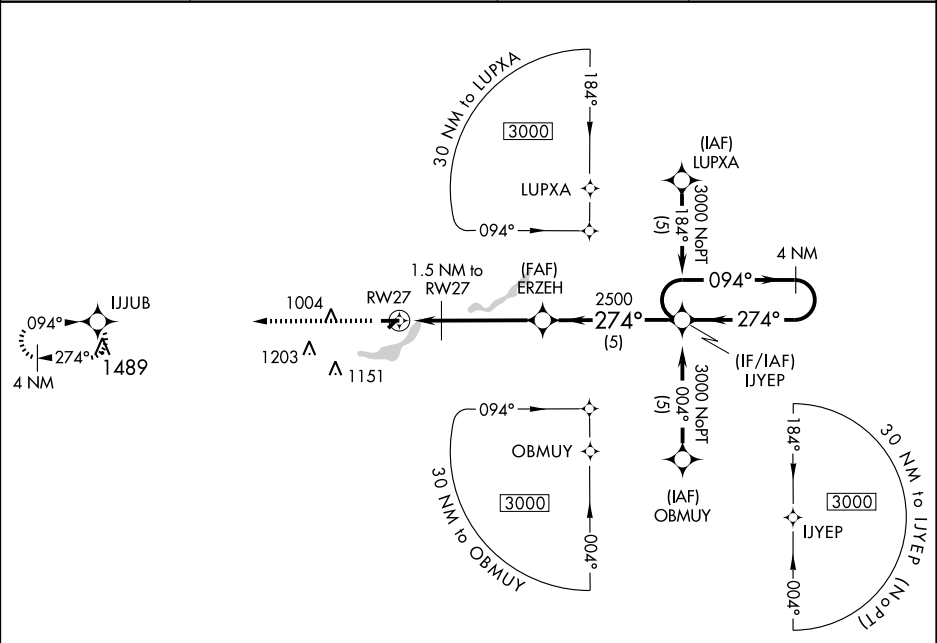
- Obstacle: 2500 MSL (HAI) with 2500 ft clearance.
- Procedure: 072° heading to NDB, 252° heading to Allpo Int, 1480* MSL altitude.
- Note: *1580 when using South Bend altimeter setting.

APP CRS 274°	Rwy Idg TDZE 823 Apt Elev 824	4000 823 824
-----------------	---	--------------------

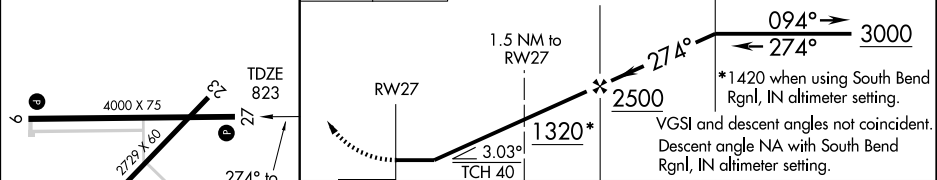
RNAV (GPS) RWY 27
THREE RIVERS MUNI DR. HAINES (HAI)

NA Obtain local altimeter setting on CTAF; when not received, use South Bend altimeter setting. GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.	MISSED APPROACH: Climb to 3000 direct IJJUB WP and hold.
--	---

AWOS-3 119.975	KALAMAZOO APP CON ★ 121.2 340.9	GCO 121.725	UNICOM 122.8 (CTAF) 0
-------------------	------------------------------------	----------------	--------------------------

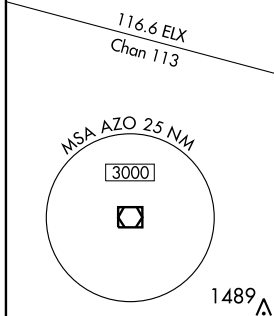
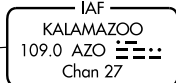


ELEV 824	3000 ↑ IJJUB ✧
----------	-------------------------



REIL Rwy 9 and 27 MIRL Rwy 5-23 and 9-27 0	CATEGORY			
SOUTH BEND RGNL, IN ALTIMETER SETTING MINIMUMS	LNAV MDA	1200-1	377 (400-1)	1200-1¼ 377 (400-1¼)
	CIRCLING	1260-1	436 (500-1)	1420-1¾ 596 (600-1¾)
	LNAV MDA	1360-1	537 (600-1)	1360-1½ 537 (600-1½)
	CIRCLING	1420-1	596 (600-1)	1560-2 736 (800-2)

AWOS-3 119.975	KALAMAZOO APP CON ★ 121.2 340.9	GCO 121.725	UNICOM 122.8 (CTAF) 0
-------------------	------------------------------------	----------------	--------------------------



ELEV 824

187° 4.7 NM from FAF

4000 X 75

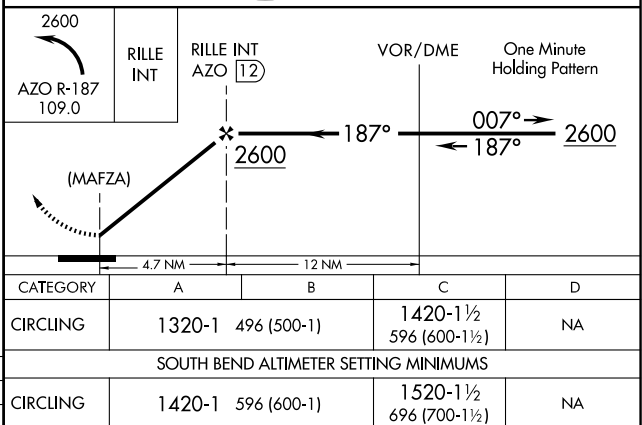
2729 X 60

REIL Rwy 9 and 27

MIRL Rwy 5-23 and 9-27

FAF to MAP 4.7 NM

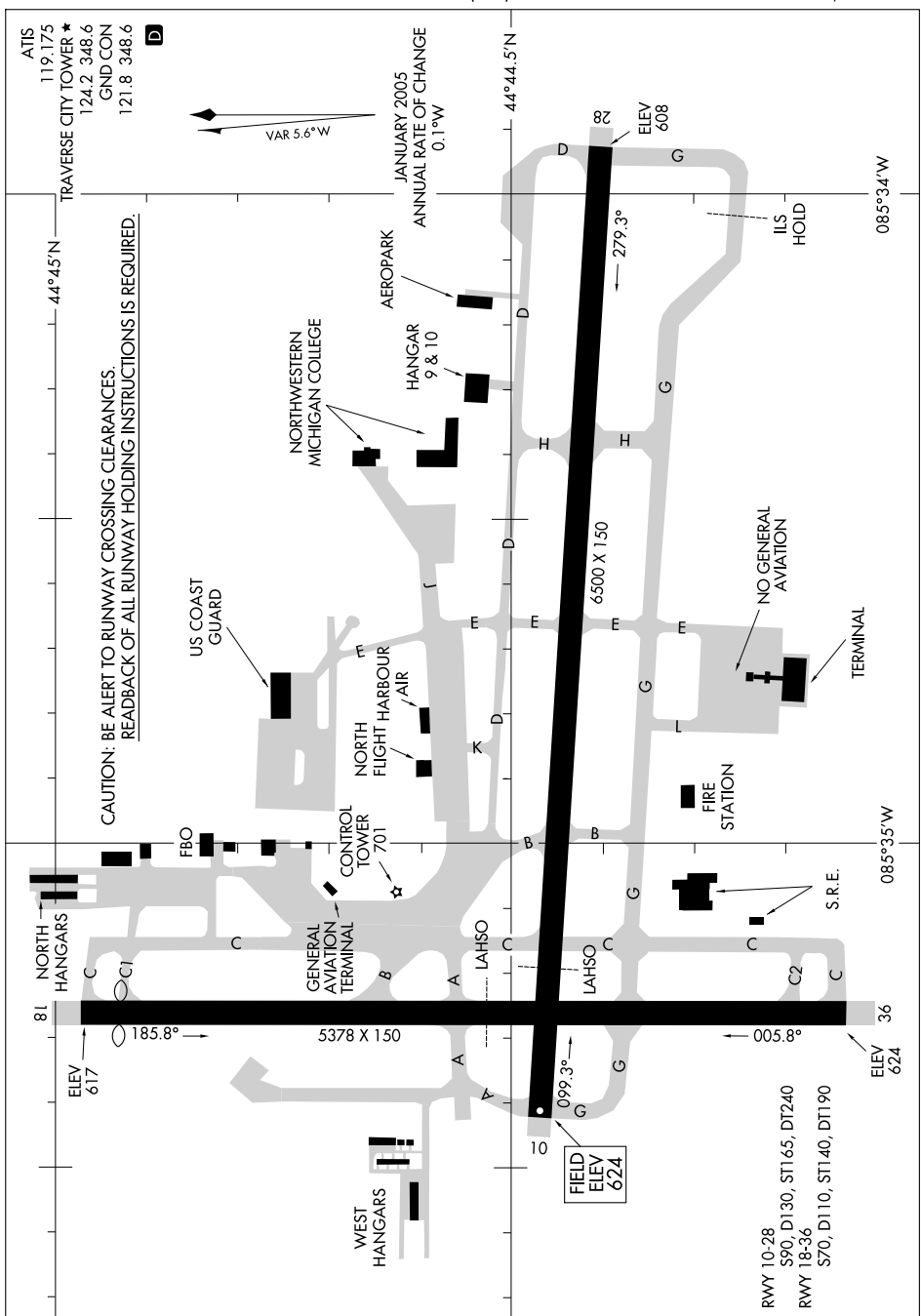
Knots	60	90	120	150	180
Min:Sec	4:42	3:08	2:21	1:53	1:34



AIRPORT DIAGRAM

AL-425 (FAA)

TRAVERSE CITY / CHERRY CAPITAL (TV'C)
TRAVERSE CITY, MICHIGAN



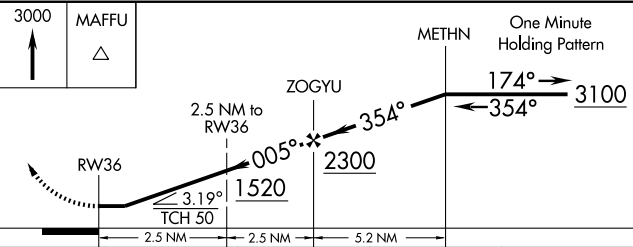
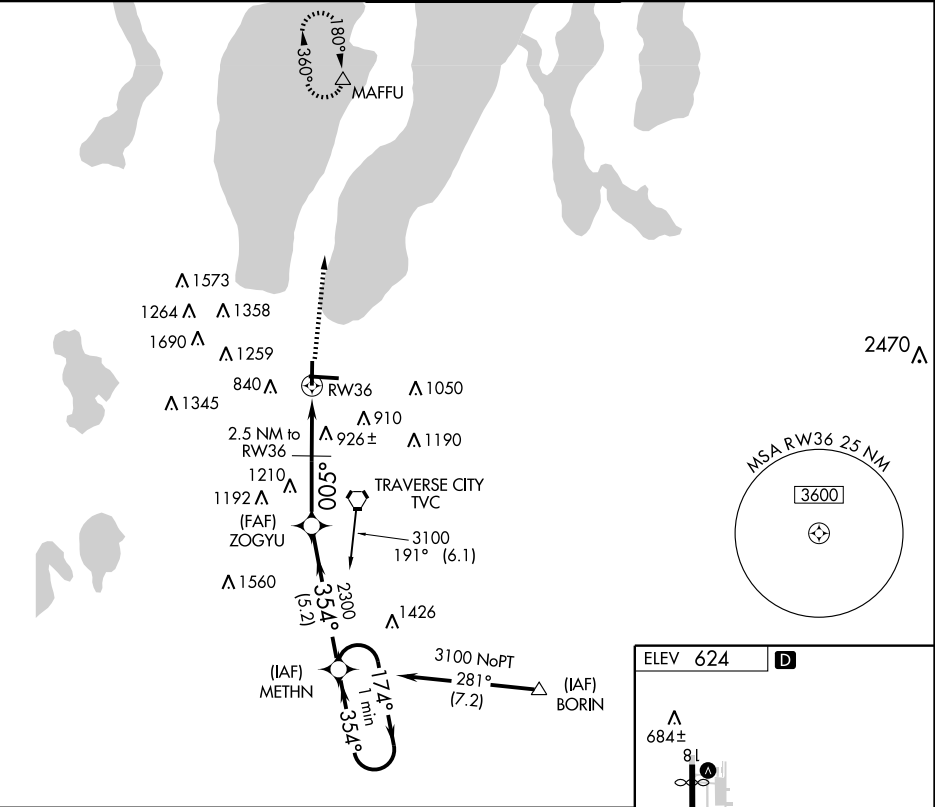
APP CRS	Rwy Idg	5378
005°	TDZE	624
	Apt Elev	624

GPS RWY 36

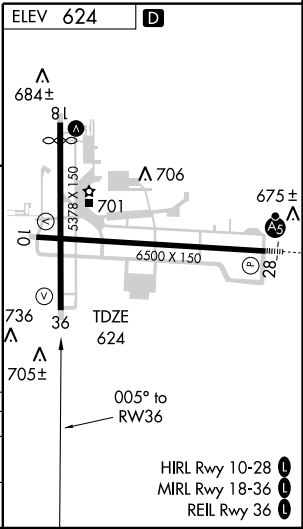
TRAVERSE CITY / CHERRY CAPITAL (TVC)

 NA	MISSED APPROACH: Climb to 3000 direct MAFFU WP and hold.
--	---

ATIS 119.175	MINNEAPOLIS CENTER 132.9 338.3	TRAVERSE CITY TOWER ★ 124.2 (CTAF) 348.6	GND CON 121.8 348.6	UNICOM 122.95
-----------------	-----------------------------------	---	------------------------	------------------



CATEGORY	A	B	C	D
S-36	1180-1	556 (600-1)	1180-1½ 556 (600-1½)	1180-1¾ 556 (600-1¾)
CIRCLING	1180-1	556 (600-1)	1260-1¾ 636 (700-1¾)	1300-2¼ 676 (700-2¼)



LOC I-TVC	APP CRS	Rwy Idg	6500
<u>110.7</u>	279°	TDZE	617
		Apt Elev	624

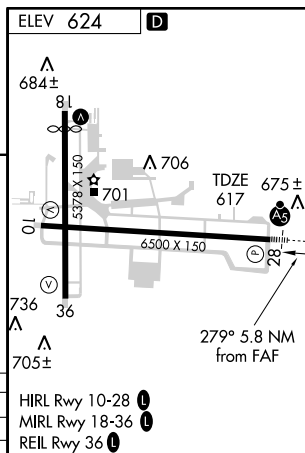
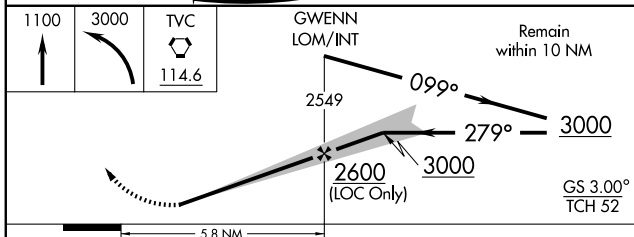
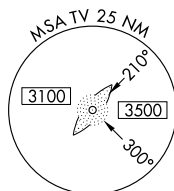
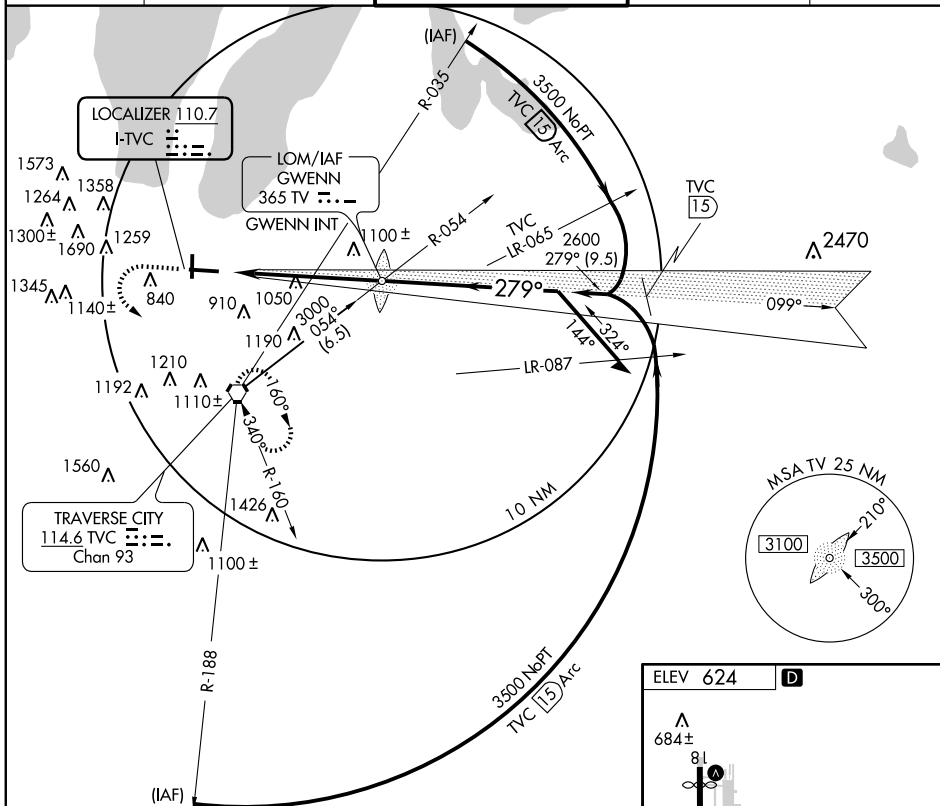
ILS RWY 28

TRAVERSE CITY / CHERRY CAPITAL (TVC)



MISSED APPROACH: Climb to 1100 then climbing left turn to 3000 direct TVC VORTAC and hold.

ATIS 119.175	MINNEAPOLIS CENTER 132.9 338.3	TRAVERSE CITY TOWER ★ 124.2(CTAF) 348.6	GND CON 121.8 348.6	UNICOM 122.95
-----------------	-----------------------------------	--	------------------------	------------------



CATEGORY	A	B	C	D
S-ILS 28		817- $\frac{1}{2}$	200 (200- $\frac{1}{2}$)	
S-LOC 28	1360- $\frac{1}{2}$ 743 (800- $\frac{1}{2}$)	1360- $\frac{3}{4}$ 743 (800- $\frac{3}{4}$)	1360-1 $\frac{3}{4}$ 743 (800-1 $\frac{3}{4}$)	1360-2 743 (800-2)
CIRCLING	1360-1 736 (800-1)	1360-1 $\frac{1}{4}$ 736 (800-1 $\frac{1}{4}$)	1360-2 $\frac{1}{4}$ 736 (800-2 $\frac{1}{4}$)	1360-2 $\frac{1}{2}$ 736 (800-2 $\frac{1}{2}$)

FAF to MAP 5.8 NM					
Knots	60	90	120	150	180
Min:Sec	5:48	3:52	2:54	2:19	1:56

LOM TV	APP CRS	Rwy Idg	6500
365	279°	TDZE	617
		Apt Elev	624

NDB or GPS RWY 28
TRAVERSE CITY / CHERRY CAPITAL (TVC)

T For inoperative MALSR increase
A Cat B S-28 visibility $\frac{1}{2}$ mile.

MALSR

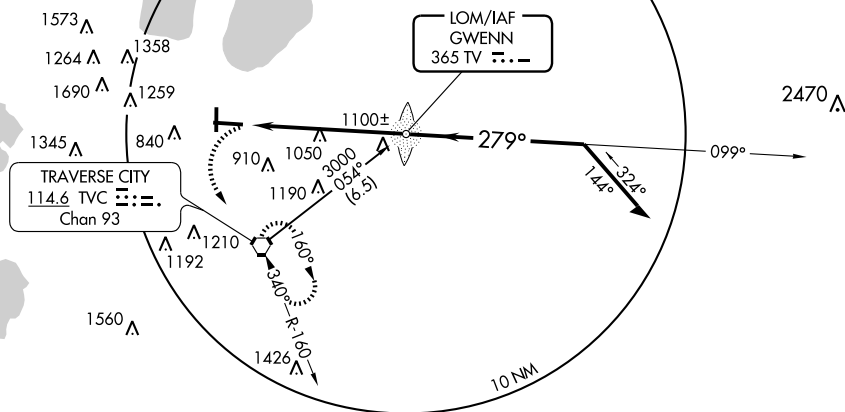
MISSED APPROACH: Climbing left turn to 3000 direct TVC VORTAC and hold.

ATIS
119.175

MINNEAPOLIS CENTER
132.9 338.3

TRAVERSE CITY TOWER ★
124.2(CTAF) 348.6

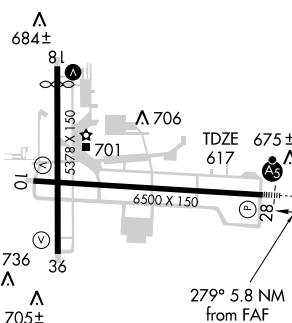
GND CON
121.8 348.6

UNICOM
122.95

EC-1. 17 DEC 2009 to 14 JAN 2010

ELEV 624



D



HIRL Rwy 10-28 **L**
MIRL Rwy 18-36 **L**
REIL Rwy 36 **L**

FAF to MAP 5.8 NM

Knots	60	90	120	150	180
Min:Sec	5:48	3:52	2:54	2:19	1:56

3000	TVC
	
	114.6

LOM

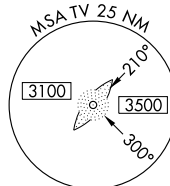
099°

279°

2600

3000

Remain within 10 NM



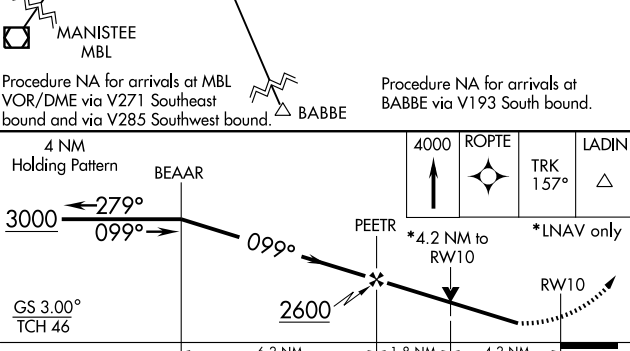
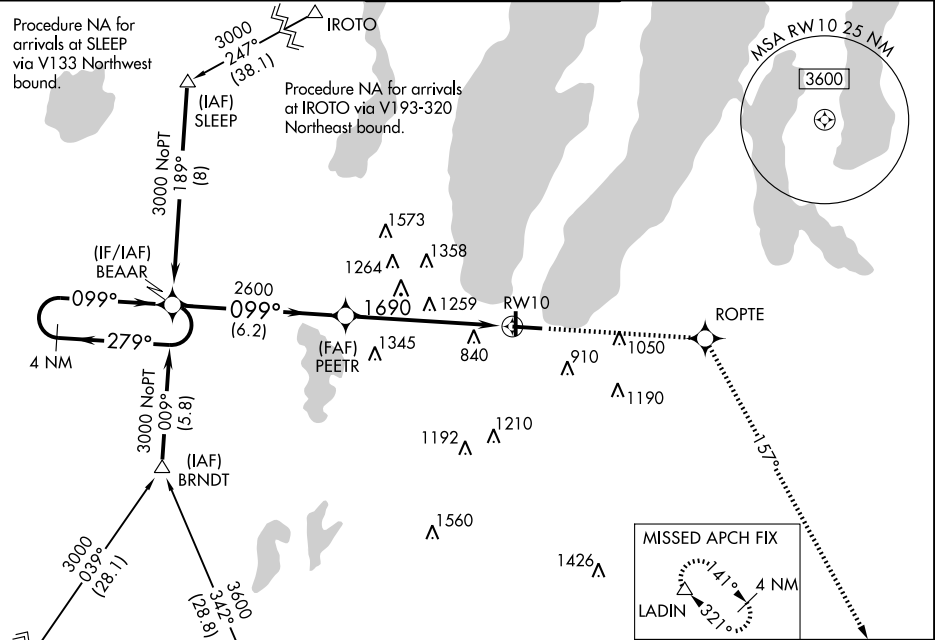
CATEGORY	A	B	C	D
S-28	1400- $\frac{3}{4}$	783 (800- $\frac{3}{4}$)	1400-1 $\frac{3}{4}$ 783 (800-1 $\frac{3}{4}$)	1400-2 $\frac{1}{4}$ 783 (800-2 $\frac{1}{4}$)
CIRCLING	1400-1 776 (800-1)	1400-1 $\frac{1}{4}$ 776 (800-1 $\frac{1}{4}$)	1400-2 $\frac{1}{4}$ 776 (800-2 $\frac{1}{4}$)	1400-2 $\frac{1}{2}$ 776 (800-2 $\frac{1}{2}$)

WAAS CH 42610 W10A	APP CRS 099°	Rwy Idg TDZE Apt Elev	6500 624 624
--	------------------------	-----------------------------	---

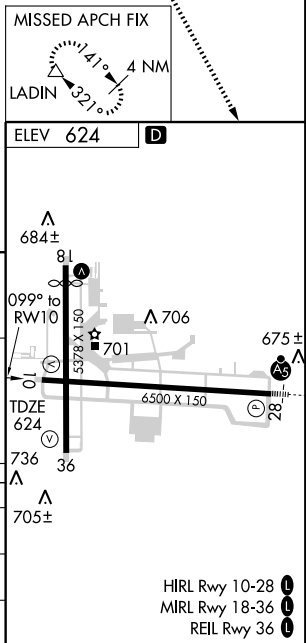
⚠ DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.
⚠ When local altimeter setting not received, use Bellaire altimeter setting and increase DA 51 feet and all MDA 60 feet, increase LPV all Cats. visibility ¼ mile. VDP NA when using Bellaire altimeter setting.

MISSED APPROACH: Climb to 4000 direct ROPTE and via 157° track to LADIN and hold.

ATIS 119.175	MINNEAPOLIS CENTER 132.9 338.3	TRAVERSE CITY TOWER* 124.2 (CTAF) 0 348.6	GND CON 121.8 348.6	UNICOM 122.95
------------------------	--	---	-------------------------------	-------------------------



CATEGORY	A	B	C	D
LPV DA	968-1¼		344 (400-1¼)	
LNAV MDA	2000-1¼ 1376 (1400-1¼)	2000-1½ 1376 (1400-1½)	2000-3	1376 (1400-3)
CIRCLING	2000-1¼ 1376 (1400-1¼)	2000-1½ 1376 (1400-1½)	2000-3	1376 (1400-3)



EC-1: 17 DEC 2009 to 14 JAN 2010

HIRL Rwy 10-28
MIRL Rwy 18-36
REIL Rwy 36

VORTAC TVC 114.6 Chan 93	APP CRS 340°	Rwy Idg TDZE Apt Elev	N/A N/A 624
--	------------------------	-----------------------------	--

VOR or TACAN or GPS-A

TRAVERSE CITY / CHERRY CAPITAL (TVC)



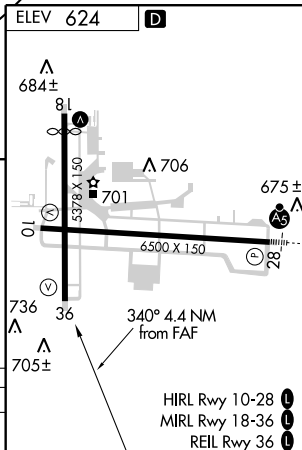
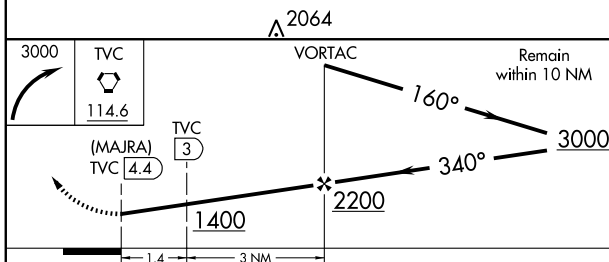
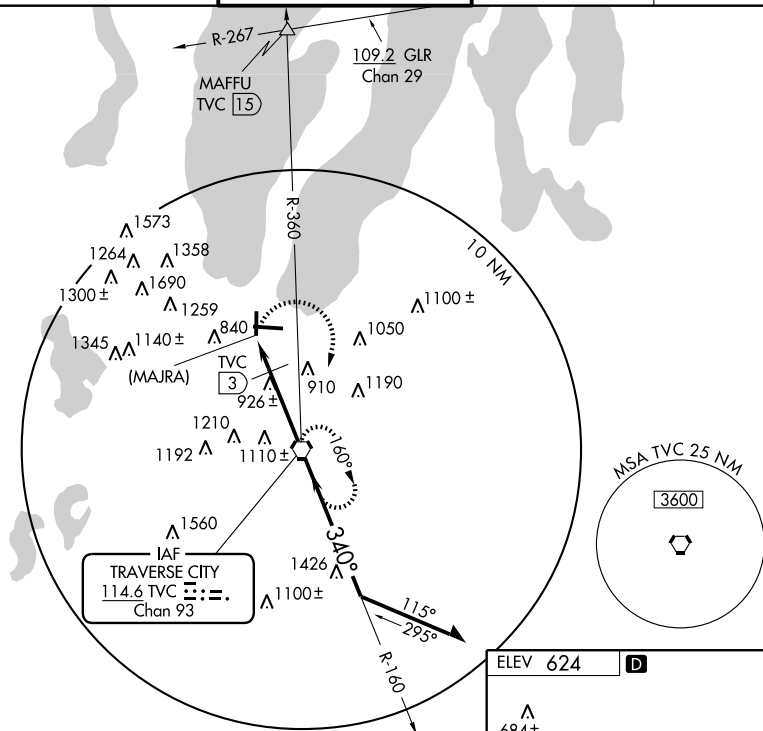
MISSED APPROACH: Climbing right turn to 3000 direct TVC VORTAC and hold. (TACAN aircraft climbing right turn to 3500 via TVC R-360 to MAFFU/Int 15 DME and hold N, RT, 180° inbound.)

ATIS
119.175

MINNEAPOLIS CENTER
132.9 338.3

TRAVERSE CITY TOWER ★
124.2 (CTAF) **L** 348.6

GND CON
121.8 348.6

UNICOM
122.95

CATEGORY	A	B	C	D
CIRCLING	1400-1 776 (800-1)	1400-1¼ 776 (800-1¼)	1400-2¼ 776 (800-2¼)	1400-2½ 776 (800-2½)

	775 (500-1)	775 (500-1½)	775 (500-2¼)	775 (500-2¾)	FAF to MAP 4.4 NM				
	DME MINIMUMS								
CIRCLING	1300-1 676 (700-1)	1300-2 676 (700-2)	1300-2¼ 676 (700-2¼)	Knots	60	90	120	150	180
				Min:Sec	4:24	2:56	2:12	1:46	1:28

DETROIT, MICHIGAN



ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUX INT. Thence

FORT WAYNE TRANSITION (FWA.CRUX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUX INT. Thence

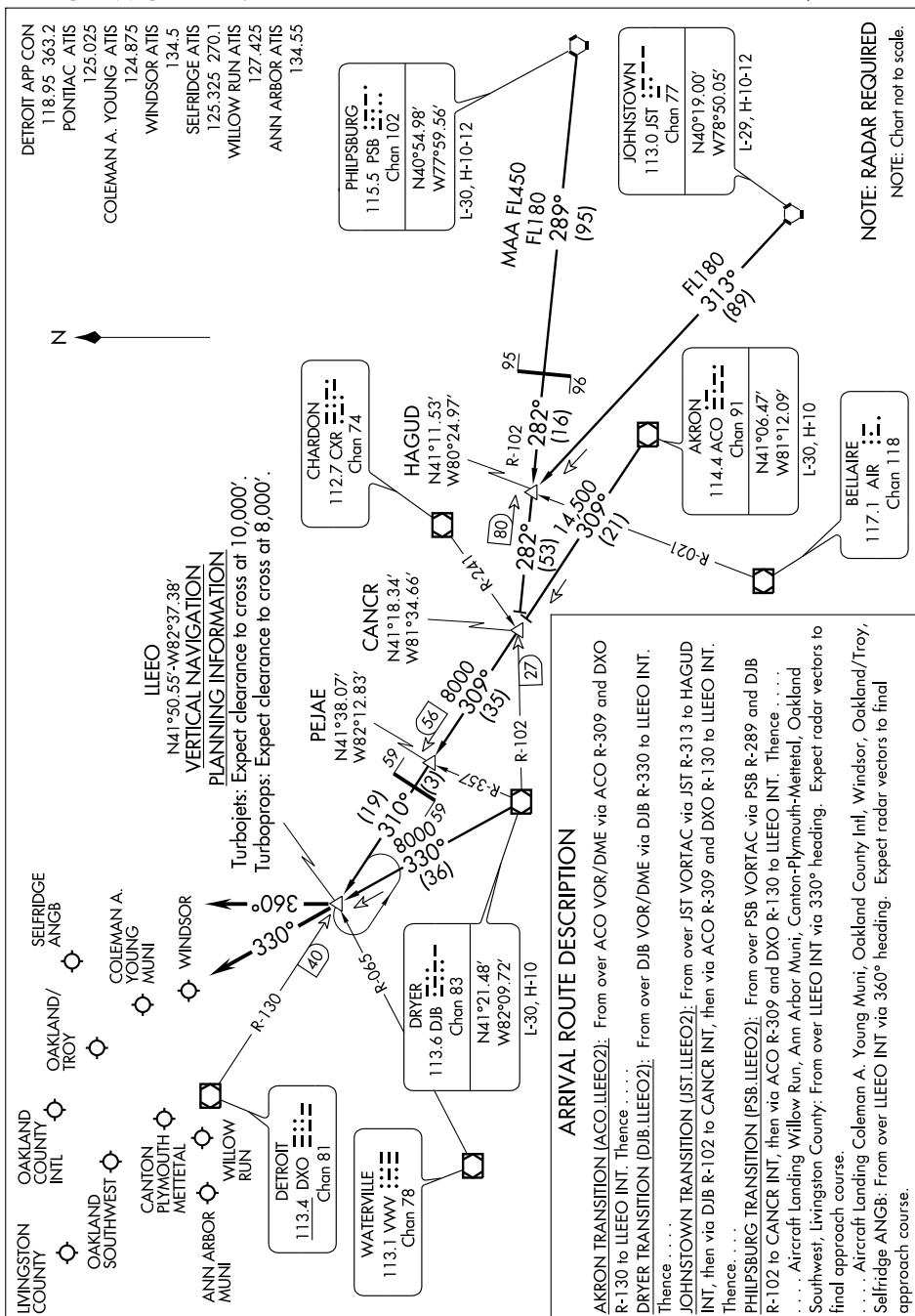
LITCHFIELD TRANSITION (LFD.CRUX4): From over LFD VORTAC via LFD R-106 to CRUX INT. Thence

. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUX INT via 025° heading.

. . . . Aircraft landing YIP or ARB: From over CRUX INT via 050° heading.
Expect radar vector to final approach course.

LLEEO TWO ARRIVAL

DETROIT, MICHIGAN



SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON

127.5 239.275

WILLOW RUN ATIS 127.425

PONTIAC ATIS 125.025

COLEMAN A. YOUNG ATIS 124.875

WINDSOR ATIS 134.5

SELFREDGE ATIS 125.325 270.1

SPRTN

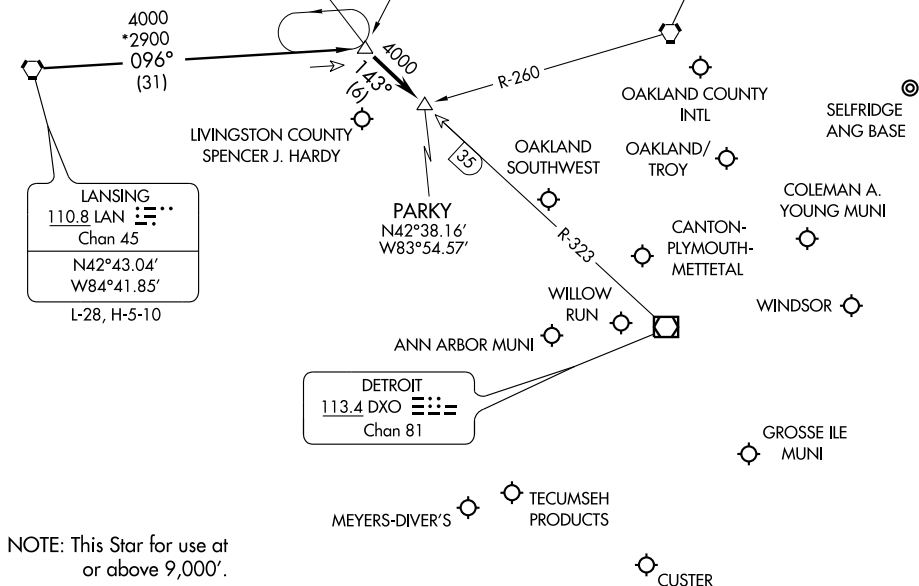
N42°42.52'-W84°00.23'

VERTICAL NAVIGATION

PLANNING INFORMATION

TURBOJETS/TURBOPROPS:

Expect clearance to cross at 9000'.



LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence

. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ,

1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence

. . . . Expect radar vectors to final approach course.

DETROIT APP CON
127.5 363.2
PONTIAC ATIS
125.025

$$Z \leftarrow$$

ARRIVAL ROUTE DESCRIPTION


LONDON TRANSITION (YXU.SWANN1): From over YXU VORTAC via YXU R-260 to PICES INT, then via PSI R-088 to SWWAN INT.

NOTE: RADAR Required.
NOTE: Chart not to scale.

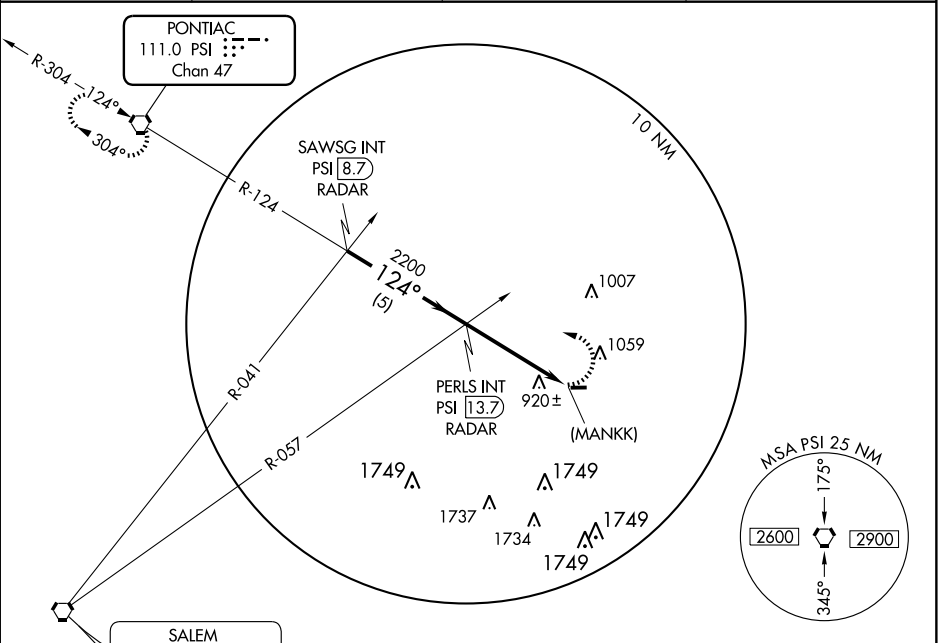
... From SWWAN, expect radar vectors to final approach course.

VORTAC PSI 111.0 Chan 47	APP CRS 124°	Rwy Idg TDZE Apt Elev N/A N/A 729
--	------------------------	---

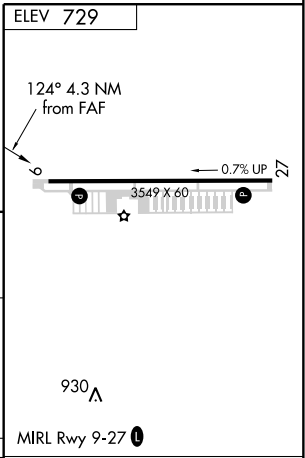
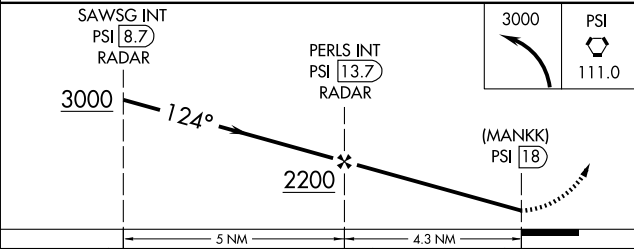
VOR or GPS-A
TROY / OAKLAND/TROY (VLL)

 NA	Use Coleman A. Young Muni altimeter setting.	MISSED APPROACH: Climbing left turn to 3000 direct PSI VORTAC and hold.
---	--	---

AWOS-3 119.475	DETROIT APP CON 126.85 363.2	CLNC DEL 121.725	UNICOM 123.05 (CTAF) 
--------------------------	--	----------------------------	--



RADAR REQUIRED



CATEGORY	A	B	C	D	FAF to MAP 4.3 NM					
CIRCLING	1400-1 671 (700-1)		1400-2 671 (700-2)	NA	Knots	60	90	120	150	180
					Min:Sec	4:18	2:52	2:09	1:43	1:26

APP CRS	Rwy Idg	5000
095°	TDZE	877
	Apt Elev	882

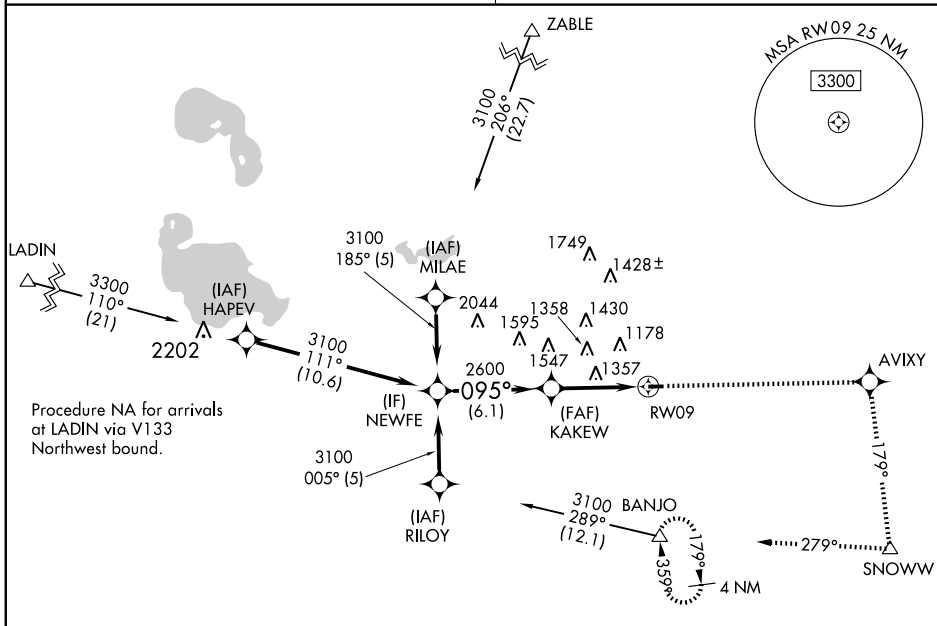
RNAV (GPS) RWY 9

WEST BRANCH COMMUNITY (Y31)

▼ DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Saginaw Intl altimeter setting and increase all MDA 140 feet, increase LNAV Cat A visibility ¼ mile and Cat C/D ½ mile, increase Circling Cat A visibility ¼ mile and Cat C/D ½ mile.

MISSED APPROACH: Climb to 4000 direct AVIXY and via track 179° to SNOWWW and via track 279° to BANJO and hold.

MINNEAPOLIS CENTER 118.525 251.15	UNICOM 122.8 (CTAF) 0
---	---------------------------------



<p>Procedure Turn NA</p> <p>NEWFE</p> <p>3100 095° KAKEW 2600 3.05° TCH 41 2.3 NM to RW09</p> <p>6.1 NM 2.9 NM 2.3</p>					<p>ELEV 882</p> <p>TDZE 877 967</p> <p>5000 X 100 0.4% UP</p> <p>095° to RW09</p>	
	4000	AVIXY	TRK 179°	SNOWWW	TRK 279°	BANJO
CATEGORY	A	B	C	D		
LNAV MDA	1660-1 783 (800-1)	1660-1¼ 783 (800-1¼)	1660-2¼ 783 (800-2¼)	1660-2½ 783 (800-2½)		
CIRCLING	1660-1 778 (800-1)	1660-1¼ 778 (800-1¼)	1660-2¼ 778 (800-2¼)	1660-2½ 778 (800-2½)		
					<p>REIL Rwy 9 and 27 0</p> <p>MIRL Rwy 9-27 0</p>	

RNAV (GPS) RWY 27

WEST BRANCH COMMUNITY (Y31)

MISSED APPROACH: Climb to 4000 direct
NEWFE and via track 185° to OKLIF and
via track 095° to BANJO and hold.

UNICOM
122.8 (CTAF) **L**

4000 ↑	NEWFE ✦	TRK 185°	OKLIF ✦	TRK 095°	BANJO △	4 NM Holding Pattern	
CATEGORY	A		B		C		D
LNAV MDA	1240-1 363 (400-1)						1240-1¼ 363 (400-1¼)
CIRCLING	1480-1 598 (600-1)		1480-1½ 598 (600-1½)		1520-2 638 (700-2)		

VOR RWY 27

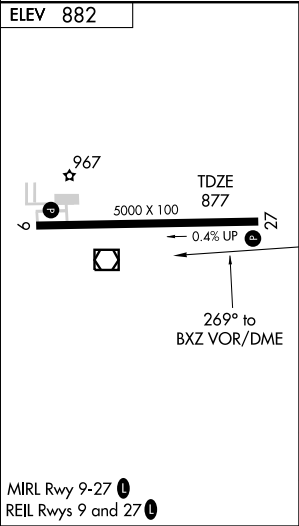
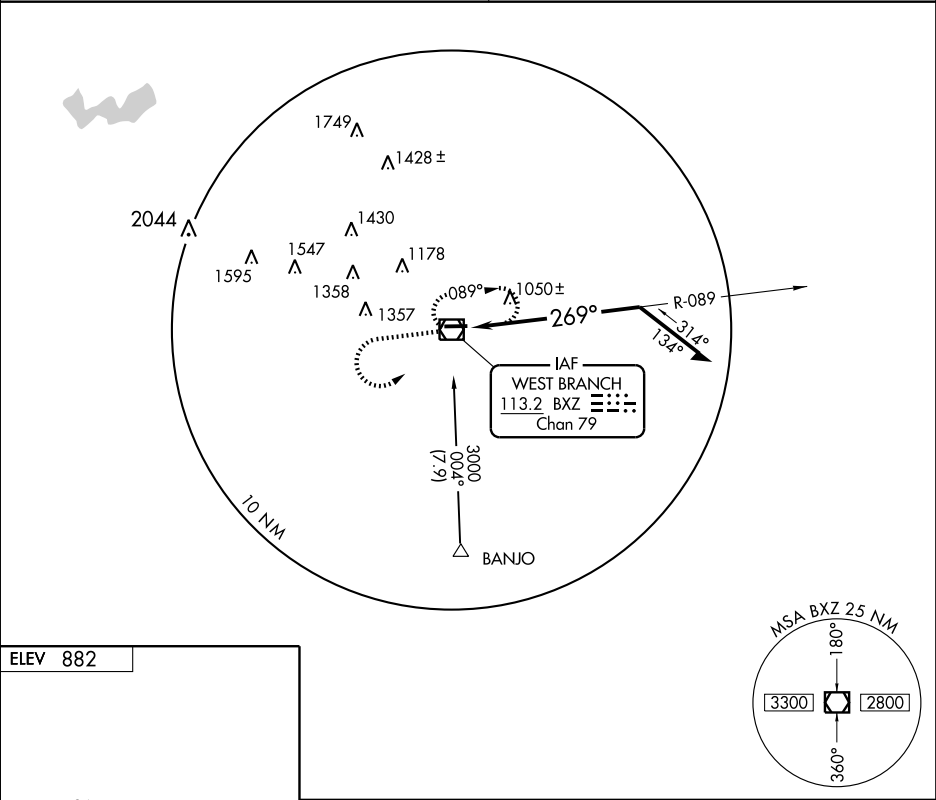
WEST BRANCH COMMUNITY (Y31)

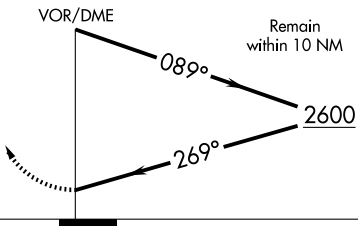
VOR/DME BXZ	APP CRS	Rwy Idg	5000
113.2	269°	TDZE	877
Chan 79		Apt Elev	882

When local altimeter setting not received, use Saginaw (MBS) Intl altimeter setting and increase all MDAs 120 feet, and all visibilities ½ mile.

MISSED APPROACH: Climb to 2000 then climbing left turn to 2600 direct BXZ VOR/DME and hold.

MINNEAPOLIS CENTER 118.525 251.15	UNICOM 122.8 (CTAF) 0
--------------------------------------	--------------------------



2000	2600	BXZ		
↑	↶	<u>113.2</u>		
CATEGORY	A	B	C	D
S-27	1360-1	483 (500-1)	1360-1¼ 483 (500-1¼)	1360-1½ 483 (500-1½)
CIRCLING	1440-1	558 (600-1)	1480-1½ 598 (600-1½)	1500-2 618 (700-2)